FEB 28 193

# Journal of the Association of American Medical Colleges

*Volume 7* MARCH, 1932 *Number 2*

CONTENTS


| | PAGE |
|---|---|
| Tendencies in Medical Practice. *H. G. Weiskotten* | 65 |
| Development of the Clinical Concept in Teaching Preventive Medicine. *W. S. Leathers* | 86 |
| Dentistry: The Errant Branch. Shall Medicine Re-adopt It? *F. T. Van Beuren, Jr.* | 97 |
| Editorials | 107 |
| News Items—College | 109 |
| " " —Personals | 115 |
| " " —Deaths | 116 |
| " " —General | 117 |
| Abstracts | 126 |


Published bimonthly, January, March, May, July, September and November, at 25 E. Washington St., Chicago, Illinois, by the Association of American Medical Colleges. Subscription Price, $3.00 per year. Single Copies, 75 cents.

Entered as second class matter January 17, 1930, at the Post Office at Chicago, Illinois, under the Act of March 3, 1879.

(Continuing the Bulletin of the Association of American Medical Colleges)

**FOUR SUCCESSFUL TEXT-BOOKS**

***See SAUNDERS' ANNOUNCEMENT—Just Inside***

# ASSOCIATION OF AMERICAN MEDICAL COLLEGES

## OFFICERS AND COMMITTEES FOR 1931-1932

*President:* Louis B. Wilson, Rochester, Minn.
*Vice-President:* H. G. Weiskotten, Syracuse, N. Y.
*Secretary-Treasurer:* Fred C. Zapffe, 25 East Washington St., Chicago.

### Executive Council

Alexander S. Begg, Chairman, Boston; G. Canby Robinson, New York City; Louis B. Wilson, Rochester, Minn.; Maurice H. Rees, Denver; C. C. Bass, New Orleans; B. D. Myers, Bloomington, Ind.; Fred C. Zapffe, Chicago.

### MEMBERS

**Alabama**

University of Alabama, School of Medicine, University.

**California**

College of Medical Evangelists, Loma Linda and Los Angeles.

Sanford University School of Medicine, San Francisco and Stanford University.

University of California Medical School, San Francisco and Berkeley.

**Canada**

McGill University Faculty of Medicine, Montreal.

University of Manitoba Faculty of Medicine, Winnipeg.

University of Toronto Faculty of Medicine, Toronto.

**Colorado**

University of Colorado School of Medicine, Denver.

**Connecticut**

Yale University School of Medicine, New Haven.

**District of Columbia**

Georgetown University School of Medicine, Washington.

George Washington University Medical School, Washington.

Howard University School of Medicine, Washington.

Army Medical School, Washington (Honorary).

Navy Medical School, Washington (Honorary).

**Georgia**

Emory University School of Medicine, Atlanta.

University of Georgia Medical Department, Augusta.

**Illinois**

Loyola University School of Medicine, Chicago.

Northwestern University Medical School, Chicago.

University of Chicago (Rush), Chicago.

University of Illinois College of Medicine, Chicago.

**Indiana**

Indiana University School of Medicine, Bloomington and Indianapolis.

**Iowa**

State University of Iowa College of Medicine, Iowa City.

**Kansas**

University of Kansas School of Medicine, Lawrence and Rosedale.

**Kentucky**

University of Louisville School of Medicine, Louisville.

**Louisiana**

Tulane University of Louisiana School of Medicine, New Orleans.

**Maryland**

Johns Hopkins University School of Medicine, Baltimore.

University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore.

**Massachusetts**

Boston University School of Medicine, Boston.

Medical School of Harvard University, Boston.

Tufts College Medical School, Boston.

**Michigan**

Detroit College of Medicine and Surgery, Detroit.

University of Michigan Medical School, Ann Arbor.

*Continued on Third Cover Page*

JOURNAL
OF THE
Association of American Medical Colleges

Volume 7 MARCH, 1932 Number 2

# Tendencies in Medical Practice

## A Study of 1925 Graduates*

H. G. WEISKOTTEN

Dean, Syracuse University College of Medicine

In 1926, I collected, through questionnaires, certain data in regard to the graduates of fifty-seven of the medical colleges of the United States for the years 1915 and 1920.[1] This study was made at the suggestion of Dr. Fred C. Zapffe, secretary of the Association of American Medical Colleges, and part of the expenses were paid by the Commission on Medical Education.

Under a grant from the Josiah Macy Jr. Foundation it has been possible this year to make a comparable study of the medical college graduates for the year 1925. The present study includes the graduates of sixty-nine medical colleges, eight of them being Canadian schools. Although the results of this year's study show no striking differences from the results of the previous study, they do tend to emphasize the reliability of the data assembled.

The names and addresses of the 1925 graduates were secured from the various medical colleges. All addresses were checked with the 1931 American Medical Directory. Questionnaires were sent to 4,302 graduates. The questionnaire was the same as the one used previously.

College.....Year of Graduation.....

1. Name.....2. Present Age.....3. Address.....
4. Is your practice general or *limited* to a specialty?.....
5. Please name specialty.....
6. After how many years of general practice did you limit your practice to a specialty? .....
7. Are you doing general practice but giving special attention to a specialty?.....
8. Please name specialty.....
9. If practice is not now limited to a specialty, do you contemplate such limitation?..... When?.....
11. Do you hold a full time salaried position?.....
    What is the nature of the work?.....
12. Do you hold a part time salaried position?.....
    What is the nature of the work?.....

REMARKS:

*Read at the Forty-second Annual Meeting of the Association of American Medical Colleges, held in New Orleans, Nov. 30, Dec. 1 and 2, 1931.

1. Bull. Assoc. Amer. M. Colleges, April, 1928; Proc., Congress on Medical Education, Licensure, Public Health and Hospitals, Chicago, 1928.

Table 1. Number and percentage of questionnaires returned by medical college graduates, according to college: 1915, 1920, and 1925.

| Medical college | 1915, 1920, and 1925 questionnaires | | | 1915 questionnaires | | | 1920 questionnaires | | | 1925 questionnaires | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total sent out | Returned | | Total sent out | Returned | | Total sent out | Returned | | Total sent out | Returned | |
| | | Number | Per cent of total | | Number | Per cent of total | | Number | Per cent of total | | Number | Per cent of total |
| All medical colleges | 9,227 | 7,011 | 76.0 | 2,401 | 1,834 | 76.4 | 2,524 | 1,947 | 77.1 | 4,302 | 3,230 | 75.1 |
| Albany | 82 | 67 | 81.7 | 46 | 38 | * | 20 | 16 | * | 16 | 13 | * |
| Alberta | 11** | 7 | * | ** | | | ** | | | 11 | 7 | * |
| Arkansas | 40 | 32 | * | 17 | 11 | * | - | - | - | 23 | 21 | * |
| Baylor | 73 | 58 | 79.5 | 16 | 10 | * | 30 | 23 | * | 27 | 25 | * |
| Boston | 80 | 58 | 72.5 | 19 | 14 | * | 11 | 8 | * | 50 | 36 | 72.0 |
| Buffalo | 161 | 122 | 75.8 | 53 | 42 | 79.2 | 57 | 42 | 73.6 | 51 | 38 | 74.5 |
| California | 81 | 67 | 82.7 | 11 | 10 | * | 21 | 15 | * | 49 | 42 | * |
| Cincinnati | 64** | 57 | 89.1 | ** | | | ** | | | 64 | 57 | 89.1 |
| Colorado | 57 | 46 | 84.2 | 8 | 7 | * | 18 | 15 | * | 31 | 26 | * |
| Columbia | 284 | 215 | 81.4 | 80 | 62 | 77.5 | 90 | 76 | 84.4 | 94 | 77 | 81.9 |
| Cornell | 128 | 80 | 62.5 | 20 | 10 | * | 51 | 29 | 56.9 | 57 | 41 | 71.9 |
| Creighton | 95 | 78 | 82.1 | 36 | 30 | * | 23 | 20 | * | 36 | 28 | * |
| Dalhousie | 43** | 28 | * | ** | | | ** | | | 43 | 28 | * |
| Detroit | 105 | 79 | 75.2 | 39 | 28 | * | 39 | 29 | * | 27 | 22 | * |
| Emory | 236 | 171 | 72.5 | 146 | 98 | 67.1 | 31 | 24 | * | 59 | 49 | 83.1 |
| Georgetown | 84 | 59 | 70.2 | 27 | 21 | * | 15 | 9 | * | 42 | 29 | * |
| George Washington | 90 | 70 | 77.8 | 23 | 18 | * | 22 | 16 | * | 45 | 36 | * |
| Georgia | 51 | 40 | 78.4 | 11 | 8 | * | 15 | 13 | * | 25 | 19 | * |
| Hahnemann | 104 | 75 | 72.1 | 20 | 14 | * | 36 | 26 | * | 48 | 35 | * |
| Harvard | 295 | 234 | 79.3 | 80 | 64 | 80.0 | 93 | 74 | 79.6 | 122 | 96 | 78.7 |
| Howard | 124 | 65 | 52.4 | 20 | 11 | * | 28 | 13 | * | 76 | 41 | 53.9 |
| Illinois | 271 | 180 | 66.4 | 88 | 50 | 56.8 | 80 | 47 | 58.8 | 103 | 83 | 80.6 |
| Indiana | 154 | 130 | 84.4 | 27 | 26 | * | 40 | 31 | * | 87 | 73 | 83.9 |
| Iowa | 151 | 133 | 88.1 | 22 | 20 | * | 53 | 45 | 84.9 | 76 | 68 | 89.5 |
| Jefferson | 426 | 335 | 78.6 | 131 | 105 | 80.2 | 162 | 130 | 80.2 | 133 | 100 | 75.3 |
| Johns Hopkins | 259 | 217 | 83.8 | 83 | 73 | 88.0 | 98 | 84 | 85.7 | 78 | 60 | 76.9 |
| Kansas | 63 | 47 | 74.6 | 10 | 8 | * | 21 | 16 | * | 32 | 23 | * |
| Laval | 31** | 17 | * | ** | | | ** | | | 31 | 17 | * |
| Long Island | 240 | 180 | 75.0 | 70 | 52 | 74.3 | 76 | 55 | 72.4 | 94 | 73 | 77.7 |
| Louisville | 138 | 106 | 76.8 | 49 | 39 | * | 26 | 16 | * | 63 | 51 | * |
| Loyola | 50** | 30 | 60.0 | ** | | | ** | | | 50 | 30 | 60.0 |
| Manitoba | 46** | 30 | * | ** | | | ** | | | 46 | 30 | * |
| Marquette | 75 | 60 | 80.0 | 25 | 20 | * | 12 | 11 | * | 38 | 29 | * |
| Maryland | 202 | 154 | 76.4 | 66 | 49 | 74.2 | 53 | 43 | 81.1 | 83 | 62 | 74.7 |
| McGill | 85** | 59 | 69.4 | ** | | | ** | | | 85 | 59 | 69.4 |
| Medical Evangelists | 95 | 71 | 74.7 | 12 | 9 | * | 16 | 12 | * | 67 | 50 | 74.6 |
| Meharry | 131 | 54 | 41.2 | 65 | 25 | 38.5 | 34 | 10 | * | 32 | 19 | * |
| Michigan | 270 | 214 | 79.3 | 42 | 35 | * | 73 | 58 | 79.5 | 155 | 121 | 78.0 |
| Minnesota | 185 | 160 | 86.5 | 34 | 30 | * | 62 | 58 | 93.5 | 89 | 72 | 80.9 |
| Montreal | 72** | 39 | 54.2 | ** | | | ** | | | 72 | 39 | 54.2 |
| Nebraska | 152 | 125 | 82.2 | 10 | 7 | * | 39 | 37 | * | 103 | 81 | 78.6 |
| New York Homeopathic | 30** | 16 | * | ** | | | ** | | | 30 | 16 | * |
| New York Univ. (Bellevue) | 298 | 217 | 72.8 | 87 | 71 | 81.6 | 109 | 72 | 66.1 | 102 | 74 | 72.5 |
| Northwestern | 206 | 161 | 78.2 | 42 | 29 | * | 66 | 52 | 78.8 | 98 | 80 | 81.6 |
| Ohio State | 147 | 117 | 79.6 | 42 | 35 | * | 22 | 20 | * | 83 | 62 | 74.7 |
| Oklahoma | 64 | 43 | 67.2 | 18 | 13 | * | 15 | 11 | * | 31 | 19 | * |
| Oregon | 73 | 62 | 84.9 | 16 | 10 | * | 12 | 10 | * | 45 | 42 | * |
| Pennsylvania | 317 | 249 | 78.5 | 54 | 46 | 85.2 | 129 | 103 | 79.9 | 134 | 100 | 74.6 |
| Pittsburgh | 90 | 76 | 84.4 | 10 | 9 | * | 33 | 31 | * | 47 | 36 | * |
| Rush | 333 | 245 | 73.6 | 84 | 73 | 86.9 | 105 | 85 | 81.0 | 144 | 87 | 60.4 |
| St. Louis | 185 | 147 | 79.5 | 39 | 33 | * | 60 | 49 | 81.7 | 86 | 65 | 75.6 |
| South Carolina | 74 | 57 | 77.0 | 24 | 19 | * | 35 | 12 | * | 15 | 26 | * |
| Stanford | 62 | 52 | 83.9 | 16 | 14 | * | 19 | 16 | * | 27 | 22 | * |
| Syracuse | 90 | 81 | 90.0 | 12 | 12 | * | 35 | 34 | * | 43 | 35 | * |
| Temple | 48** | 29 | * | ** | | | ** | | | 48 | 29 | * |
| Tennessee | 132 | 101 | 76.5 | 60 | 43 | 71.7 | 15 | 11 | * | 57 | 47 | 82.5 |
| Texas | 156 | 122 | 78.2 | 33 | 29 | * | 65 | 47 | 72.3 | 58 | 46 | 79.3 |
| Toronto | 128** | 86 | 67.2 | ** | | | ** | | | 128 | 86 | 67.2 |
| Tufts | 244 | 167 | 68.4 | 61 | 38 | 62.3 | 79 | 50 | 63.3 | 104 | 79 | 76.0 |
| Tulane | 236 | 183 | 77.5 | 71 | 59 | 83.1 | 81 | 58 | 71.6 | 84 | 66 | 78.6 |
| Vanderbilt | 156 | 112 | 71.8 | 86 | 59 | 68.6 | 27 | 18 | * | 43 | 35 | * |
| Vermont | 89 | 77 | 86.5 | 33 | 32 | * | 21 | 21 | * | 35 | 24 | * |
| Virginia (Medical College) | 172 | 124 | 72.1 | 88 | 63 | 71.6 | 22 | 16 | * | 62 | 45 | 72.6 |
| Virginia (University) | 105 | 91 | 86.7 | 25 | 20 | * | 27 | 26 | * | 53 | 45 | 84.9 |
| Washington | 146 | 121 | 82.9 | 29 | 28 | * | 42 | 37 | * | 75 | 56 | 74.7 |
| Western Ontario | 22** | 16 | * | ** | | | ** | | | 22 | 16 | * |
| Western Reserve | 124 | 106 | 85.5 | 32 | 30 | * | 52 | 44 | 84.6 | 40 | 32 | * |
| Women's Medical College | 65 | 42 | 64.6 | 26 | 18 | * | 10 | 7 | * | 29 | 17 | * |
| Yale | 69 | 60 | 87.0 | 7 | 7 | * | 18 | 16 | * | 44 | 37 | * |

*Per cent not shown when base is less than 50.

**Data for 1925 graduates only.

"Follow up" letters were sent to those who did not return the questionnaires within one month. I received 3230, or 75.1 per cent of the

Table 2. Medical college graduates, according to age of 1915 and 1920 graduates in 1926, and age of 1925 graduates in 1931

| Age group | 1915 graduates | | 1920 graduates | | 1925 graduates | |
|---|---|---|---|---|---|---|
| | Number | Per cent distribution | Number | Per cent distribution | Number | Per cent distribution |
| All ages | 1,834 | 100.0 | 1,947 | 100.0 | 3,230 | 100.0 |
| 25 to 29 years | - | - | 346 | 17.7 | 362 | 11.2 |
| 30 to 34 years | 420 | 22.9 | 1,288 | 66.1 | 2,196 | 68.0 |
| 35 to 39 years | 1,117 | 60.9 | 252 | 12.9 | 541 | 16.7 |
| 40 to 44 years | 212 | 11.6 | 37 | 1.9 | 78 | 2.4 |
| 45 to 49 years | 58 | 3.1 | 7 | 0.4 | 22 | 0.7 |
| 50 years and older | 14 | 0.8 | 3 | 0.2 | 2 | 0.1 |
| Age not reported | 13 | 0.8 | 14 | 0.8 | 32 | 1.0 |

questionnaires, filled out. Table 1 shows by colleges the number of questionnaires sent out and the number and per cent returned. Compar-

Table 3 Medical college graduates, according to community in which the 1915 and 1920 graduates were practicing in 1926, and the community in which the 1925 graduates were practicing in 1931*.

| Community | 1915 graduates | | 1920 graduates | | 1925 graduates | |
|---|---|---|---|---|---|---|
| | Number | Per cent distribution | Number | Per cent distribution | Number | Per cent distribution |
| All communities | 1,834 | 100.0 | 1,947 | 100.0 | 3,230 | 100.0 |
| Cities of 500,000 population and over | 516 | 28.1 | 616 | 31.6 | 1,020 | 31.6 |
| Cities of 100,000 to 500,000 population | 347 | 18.9 | 352 | 18.1 | 673 | 20.8 |
| Balance of states | 940 | 51.2 | 943 | 48.4 | 1,536 | 47.2 |
| Foreign countries | 31 | 1.8 | 36 | 1.9 | 11** | 0.3 |

*Communities in which 1915 and 1920 graduates practiced were classified according to the Federal Census of 1920; similarly, the Federal Census of 1930 and the Canadian Census of 1931 were used to classify communities in which 1925 graduates practiced.
**Only those foreign communities whose size was not known are included in this group.

able data from the previous study of the 1915 and 1920 graduates are also included in this table.

It will be important to bear in mind that the data for the 1915 and 1920 graduates were assembled in 1926. Thus, while the data for the 1920 and 1925 graduates are entirely comparable, those for the 1915 graduates represent conditions existing eleven years after graduation.

Table 4. Medical college graduates practicing in communities of specified size, according to college: 1925.

| Medical college | Total | Graduates practicing in communities of specified size: 500,000 and over | 100,000 to 500,000 | 50,000 to 100,000 | 25,000 to 50,000 | 10,000 to 25,000 | 5,000 to 10,000 | Less than 5,000 | Army and Navy (only address) | Foreign communities (size unknown) |
|---|---|---|---|---|---|---|---|---|---|---|
| All medical colleges | 3,230 | 1,020 | 673 | 236 | 206 | 278 | 178 | 626 | 2 | 11 |
| Albany | 13 | - | 5 | 2 | - | 3 | - | 3 | - | - |
| Alberta | 7 | 1 | - | 1 | - | - | 1 | 5 | - | - |
| Arkansas | 21 | 1 | 1 | 1 | 3 | 2 | 1 | 6 | - | - |
| Baylor | 25 | 7 | 7 | 2 | 6 | 2 | 2 | 3 | - | - |
| Boston | 36 | 3 | 9 | 6 | 1 | 5 | - | 4 | - | - |
| Buffalo | 38 | 11 | 4 | 4 | - | 6 | 1 | 4 | - | - |
| California | 42 | 19 | 3 | 2 | 1 | 7 | 1 | 8 | - | - |
| Cincinnati | 57 | 20 | 7 | 4 | 3 | 4 | 2 | 12 | - | - |
| Colorado | 26 | 5 | 27 | 1 | 1 | 1 | 5 | 2 | - | - |
| Columbia | 77 | 5 | 13 | 1 | 3 | 4 | 5 | 4 | - | - |
| Cornell | 41 | 16 | 10 | 1 | 3 | 5 | 3 | 3 | - | 1 |
| Creighton | 28 | 1 | 6 | 4 | 2 | 5 | - | 9 | - | - |
| Dalhousie | 28 | 1 | 8 | 3 | 2 | 5 | 4 | 13 | - | 1 |
| Detroit | 22 | 14 | - | 4 | 1 | - | 1 | 1 | - | - |
| Emory | 49 | 4 | 18 | 2 | 3 | 3 | 3 | 14 | - | - |
| Georgetown | 29 | 8 | 12 | 1 | 2 | 1 | 1 | 4 | - | - |
| George Washington | 36 | 5 | 18 | 3 | 2 | 5 | 1 | 3 | - | - |
| Georgia | 19 | - | 5 | 2 | 3 | 1 | 1 | 6 | - | - |
| Hahnemann | 32 | 5 | 9 | 4 | 1 | 2 | 8 | 2 | - | - |
| Harvard | 98 | 45 | 27 | 6 | 4 | 5 | 4 | 6 | - | 1 |
| Howard | 41 | 12 | 11 | 4 | 6 | 6 | 1 | 1 | - | - |
| Illinois | 83 | 49 | 1 | 5 | 9 | 3 | 3 | 12 | - | 1 |
| Indiana | 73 | 11 | 26 | 2 | 8 | 11 | 5 | 9 | - | 1 |
| Iowa | 68 | 17 | 10 | 4 | 6 | 7 | 7 | 17 | - | - |
| Jefferson | 100 | 25 | 16 | 11 | 7 | 10 | 6 | 23 | - | 1 |
| Johns Hopkins | 60 | 22 | 15 | 10 | 1 | 8 | - | 3 | - | - |
| Kansas | 23 | 2 | 10 | - | - | 1 | - | 9 | 1 | - |
| Laval | 17 | - | 6 | - | - | 2 | 1 | 8 | - | - |
| Long Island | 73 | 67 | 4 | 1 | 1 | - | - | 1 | - | - |
| Louisville | 51 | 5 | 17 | 1 | 1 | 2 | 5 | 20 | - | - |
| Loyola | 30 | 21 | 3 | - | 1 | - | - | 3 | - | - |
| Manitoba | 30 | 5 | 6 | 1 | - | - | 3 | 15 | - | - |
| Marquette | 29 | 16 | 1 | 2 | 2 | - | 1 | 8 | - | - |
| Maryland | 62 | 19 | 13 | 2 | 6 | 3 | 1 | 18 | - | - |
| McGill | 59 | 21 | 7 | 3 | 4 | 6 | 1 | 12 | - | - |
| Medical Evangelists | 50 | 11 | 6 | 3 | 3 | 2 | 6 | 20 | - | - |
| Meharry | 19 | 4 | 6 | 1 | - | 2 | 3 | 1 | - | - |
| Michigan | 121 | 45 | 26 | 18 | 6 | 7 | 3 | 15 | 1 | 1 |
| Minnesota | 72 | 7 | 20 | 3 | 4 | 10 | 8 | 20 | - | - |
| Montreal | 39 | 16 | 1 | 1 | 8 | 3 | 3 | 7 | - | - |
| Nebraska | 81 | 10 | 19 | 3 | 2 | 7 | 6 | 34 | - | 2 |
| New York Homeopathic | 16 | 13 | 1 | 1 | - | - | 1 | - | - | - |
| New York University (Bellevue) | 74 | 53 | 6 | 2 | 2 | 1 | 3 | 5 | - | - |
| Northwestern | 80 | 33 | 10 | 5 | 5 | 11 | 6 | 10 | - | - |
| Ohio State | 62 | 8 | 29 | 2 | 3 | 3 | 4 | 13 | - | - |
| Oklahoma | 19 | 2 | 5 | 1 | - | 3 | 2 | 6 | - | - |
| Oregon | 42 | 4 | 23 | 2 | 3 | 3 | - | 7 | - | - |
| Pennsylvania | 100 | 34 | 11 | 9 | 7 | 11 | 13 | 15 | - | - |
| Pittsburgh | 36 | 20 | - | 1 | 1 | 4 | 2 | 8 | - | 1 |
| Rush | 87 | 42 | 11 | 6 | 5 | 6 | 2 | 14 | - | - |
| St. Louis | 65 | 31 | 13 | 3 | 4 | 4 | 3 | 7 | - | - |
| South Carolina | 26 | - | 2 | 8 | 1 | 1 | 1 | 10 | - | - |
| Stanford | 22 | 11 | 3 | 1 | 3 | 3 | - | - | - | - |
| Syracuse | 35 | 9 | 11 | 3 | - | 1 | 1 | 9 | - | - |
| Temple | 29 | 17 | 3 | 3 | 5 | 4 | 2 | 3 | - | - |
| Tennessee | 47 | 5 | 13 | 2 | 4 | 7 | 1 | 18 | - | - |
| Texas | 46 | 1 | 16 | 6 | 3 | 5 | 3 | 9 | - | - |
| Toronto | 86 | 32 | 13 | 2 | 8 | 7 | 4 | 27 | - | - |
| Tufts | 79 | 31 | 16 | 8 | 5 | 12 | 2 | 7 | - | - |
| Tulane | 66 | 3 | 18 | 4 | 1 | 7 | 4 | 15 | 1 | 1 |
| Vanderbilt | 35 | 4 | 9 | - | 1 | 2 | 3 | 9 | - | - |
| Vermont | 24 | 4 | 2 | 5 | 2 | 1 | 3 | 3 | - | - |
| Virginia (Medical College) | 45 | 9 | 8 | 1 | 5 | 7 | 2 | 18 | - | - |
| Virginia (University) | 45 | 8 | 10 | 8 | 5 | 5 | 7 | 13 | - | - |
| Washington | 56 | 15 | 12 | 4 | 1 | 2 | 2 | 11 | - | - |
| Western Ontario | 16 | 1 | 2 | 3 | 1 | 6 | 2 | 4 | - | - |
| Western Reserve | 32 | 7 | 5 | 1 | - | 1 | 2 | 3 | - | - |
| Woman's Medical College | 17 | 5 | 4 | 2 | 3 | 2 | - | 4 | - | - |
| Yale | 37 | 13 | 12 | | | | | 5 | | 2 |

Table 5. Number and percentage of 1925 medical college graduates practicing in same state and in same city[1] as the college, according to medical college.

| Medical college | 1925 graduates | | | | |
|---|---|---|---|---|---|
| | Total | Practicing in same state as college | | Practicing in same city[1] as college | |
| | | Number | Per cent of total | Number | Per cent of total |
| All medical colleges | 3,230 | 1,658 | 51.3 | 850 | 26.3 |
| Albany | 13 | 13 | ** | 5 | ** |
| Alberta | 7 | 2 | ** | - | ** |
| Arkansas | 21 | 5 | ** | - | ** |
| Baylor | 29 | 15 | ** | 5 | ** |
| Boston | 36 | 19 | ** | 5 | ** |
| Buffalo | 54 | 31 | ** | 18 | ** |
| California | 142 | 58 | ** | 18 | ** |
| Cincinnati | 57 | 36 | 63.2 | 19 | 33.3 |
| Colorado | 25 | 12 | ** | 9 | ** |
| Columbia | 77 | 58 | 75.3 | 48 | 62.3 |
| Cornell | 41 | 22 | ** | 15 | ** |
| Creighton | 28 | 7 | ** | 2 | ** |
| Dalhousie | 28 | 17 | ** | 3 | ** |
| Detroit | 22 | 22 | ** | 18 | ** |
| Emory | 49 | 26 | ** | 14 | ** |
| Georgetown | 29 | 6 | ** | 6 | ** |
| George Washington | 36 | 17 | ** | 17 | ** |
| Georgia | 19 | 7 | ** | 1 | ** |
| Hahnemann | 35 | 21 | ** | 4 | ** |
| Harvard | 96 | 30 | 31.3 | 18 | 18.8 |
| Howard | 41 | 6 | ** | 6 | ** |
| Illinois | 83 | 51 | 61.4 | 37 | 44.6 |
| Indiana | 73 | 46 | 72.7 | 11 | 15.1 |
| Iowa | 68 | 19 | 27.9 | 3 | 4.4 |
| Jefferson | 100 | 49 | 49.0 | 20 | 20.0 |
| Johns Hopkins | 60 | 12 | 20.0 | 12 | 20.0 |
| Kansas | 23 | 8 | ** | - | - |
| Laval | 17 | 16 | ** | 6 | ** |
| Long Island | 73 | 66 | 90.4 | 65 | 89.0 |
| Louisville | 51 | 22 | 43.1 | 12 | 23.5 |
| Loyola | 30 | 21 | ** | 18 | ** |
| Manitoba | 30 | 12 | ** | 5 | ** |
| Marquette | 29 | 26 | ** | 16 | ** |
| Maryland | 62 | 18 | 29.0 | 11 | 17.7 |
| McGill | 59 | 11 | 18.6 | 9 | 15.3 |
| Medical Evangelists | 50 | 38 | 76.0 | 11 | 22.0 |
| Meharry | 19 | 1 | ** | - | ** |
| Michigan | 121 | 60 | 49.6 | 5 | 4.1 |
| Minnesota | 72 | 39 | 54.2 | 16 | 22.2 |
| Montreal | 39 | 24 | ** | 16 | ** |
| Nebraska | 81 | 29 | 35.8 | 6 | 7.4 |
| New York Homeopathic | 16 | 13 | ** | 12 | ** |
| New York Univ. (Bellevue) | 74 | 56 | 75.7 | 53 | 71.6 |
| Northwestern | 80 | 36 | 45.0 | 25 | 31.3 |
| Ohio State | 62 | 47 | 75.8 | 17 | 27.4 |
| Oklahoma | 19 | 10 | ** | 3 | ** |
| Oregon | 42 | 23 | ** | 16 | ** |
| Pennsylvania | 100 | 41 | 41.0 | 19 | 19.0 |
| Pittsburgh | 36 | 30 | ** | 20 | ** |
| Rush | 87 | 49 | 56.3 | 38 | 43.7 |
| St. Louis | 64 | 21 | 32.3 | 15 | 23.1 |
| South Carolina | 26 | 13 | ** | 2 | ** |
| Stanford | 22 | 20 | ** | 9 | ** |
| Syracuse | 35 | 29 | ** | 6 | ** |
| Temple | 29 | 25 | ** | 17 | ** |
| Tennessee | 47 | 13 | ** | 4 | ** |
| Texas | 46 | 38 | ** | 2 | ** |
| Toronto | 86 | 35 | 40.7 | 18 | 20.9 |
| Tufts | 79 | 42 | 53.2 | 13 | 16.5 |
| Tulane | 66 | 27 | 40.9 | 12 | 18.2 |
| Vanderbilt | 35 | 15 | ** | 5 | ** |
| Vermont | 24 | 4 | ** | 1 | ** |
| Virginia (Medical College) | 45 | 11 | ** | 4 | ** |
| Virginia (University) | 45 | 14 | ** | 1 | ** |
| Washington | 56 | 20 | 35.7 | 11 | 19.6 |
| Western Ontario | 16 | 9 | ** | 2 | ** |
| Western Reserve | 32 | 17 | ** | 6 | ** |
| Women's Medical | 17 | 9 | ** | 2 | ** |
| Yale | 37 | 13 | ** | 7 | ** |

Table 6. 1925 medical college graduates, according to states in which they are practicing, compared with the population distribution in 1930.[1]

| State | 1925 graduates | | 1930 population | |
|---|---|---|---|---|
| | Number | Per cent distribution | Number | Per cent distribution |
| Continental U. S. | 3,026** | 100.0 | 122,775,046 | 100.0 |
| Alabama | 26 | 0.9 | 2,646,248 | 2.2 |
| Arizona | 6 | 0.2 | 435,573 | 0.4 |
| Arkansas | 12 | 0.4 | 1,854,482 | 1.5 |
| California | 232 | 7.7 | 5,677,251 | 4.6 |
| Colorado | 26 | 0.9 | 1,035,791 | 0.8 |
| Connecticut | 47 | 1.6 | 1,606,903 | 1.3 |
| Delaware | 8 | 0.3 | 238,380 | 0.2 |
| District of Columbia | 49 | 1.6 | 486,869 | 0.4 |
| Florida | 25 | 0.8 | 1,468,211 | 1.2 |
| Georgia | 39 | 1.3 | 2,908,506 | 2.4 |
| Idaho | 11 | 0.4 | 445,032 | 0.4 |
| Illinois | 213 | 7.0 | 7,630,654 | 6.2 |
| Indiana | 68 | 2.2 | 3,238,503 | 2.6 |
| Iowa | 43 | 1.4 | 2,470,939 | 2.0 |
| Kansas | 24 | 0.8 | 1,880,999 | 1.5 |
| Kentucky | 35 | 1.2 | 2,614,589 | 2.1 |
| Louisiana | 34 | 1.1 | 2,101,593 | 1.7 |
| Maine | 11 | 0.4 | 797,423 | 0.6 |
| Maryland | 49 | 1.6 | 1,631,526 | 1.3 |
| Massachusetts | 127 | 4.2 | 4,249,614 | 3.5 |
| Michigan | 158 | 5.2 | 4,842,325 | 3.9 |
| Minnesota | 75 | 2.5 | 2,563,953 | 2.1 |
| Mississippi | 10 | 0.3 | 2,009,821 | 1.6 |
| Missouri | 64 | 2.1 | 3,629,367 | 3.0 |
| Montana | 9 | 0.3 | 537,606 | 0.4 |
| Nebraska | 44 | 1.5 | 1,377,963 | 1.1 |
| Nevada | 4 | 0.1 | 91,058 | 0.1 |
| New Hampshire | 5 | 0.2 | 465,293 | 0.4 |
| New Jersey | 124 | 4.1 | 4,041,334 | 3.3 |
| New Mexico | 6 | 0.2 | 423,317 | 0.3 |
| New York | 521 | 17.2 | 12,588,066 | 10.3 |
| North Carolina | 52 | 1.7 | 3,170,276 | 2.6 |
| North Dakota | 9 | 0.3 | 680,845 | 0.6 |
| Ohio | 178 | 5.9 | 6,646,697 | 5.4 |
| Oklahoma | 27 | 0.9 | 2,396,040 | 2.0 |
| Oregon | 34 | 1.1 | 953,786 | 0.8 |
| Pennsylvania | 237 | 7.8 | 9,631,350 | 7.8 |
| Rhode Island | 20 | 0.7 | 687,497 | 0.6 |
| South Carolina | 18 | 0.6 | 1,738,765 | 1.4 |
| South Dakota | 8 | 0.3 | 692,849 | 0.6 |
| Tennessee | 45 | 1.5 | 2,616,556 | 2.1 |
| Texas | 95 | 3.1 | 5,824,715 | 4.7 |
| Utah | 11 | 0.4 | 507,847 | 0.4 |
| Vermont | 7 | 0.2 | 359,611 | 0.3 |
| Virginia | 36 | 1.2 | 2,421,851 | 2.0 |
| Washington | 34 | 1.1 | 1,563,396 | 1.3 |
| West Virginia | 54 | 1.8 | 1,729,205 | 1.4 |
| Wisconsin | 52 | 1.7 | 2,939,006 | 2.4 |
| Wyoming | 4 | 0.1 | 225,565 | 0.2 |

TABLE 5.

1. In this table a liberal interpretation of the "same city" has been made. For instance, both St. Paul and Minneapolis have been considered as the "same city" in the case of the University of Minnesota, which is located between these two cities. Medical colleges located in suburbs of large cities have been considered part of the larger city.

*Per cent not shown when base is less than 50.

TABLE 6.

1. Data from the Federal Census of 1930.

** 204 graduates practising in Canada and in other foreign countries are omitted from this table.

AGE.—Table 2 shows the age of the graduates according to five year periods. This table tends to substantiate the statement that the average age of medical students at graduation is tending to increase. Only 11.2 per cent of the 1925 graduates are now between 25 and 29 years of age as compared with corresponding figures of 17.7 per cent for the 1920 graduates and 22.9 per cent for the 1915 graduates. This may be, at least in part, explained on the basis of increased requirements for entrance and the increased competition for admission to medical colleges. On the other hand, the fact that 16.7 per cent of the 1925 graduates are now between 35 and 39 years of age as compared with corresponding figures of 12.9 per cent and 11.5 per cent for the 1920 and 1915 graduates, respectively, indicates that an increasing number of men are beginning the study of medicine when they are between the ages of 25 and 30. This latter group enters on the study of medicine after having spent some time in other fields of endeavor.

DISTRIBUTION.—The distribution of the 1925 graduates according to the population of the community in which they are practicing is shown in Table 3 with comparable data for the 1915 and 1920 graduates. The 1930 census shows only 17 per cent of the population of the United States in communities of 500,000 and over and only 12.6 per cent in communities of from 100,000 to 500,000. The table shows a possible slight tendency for a smaller per cent of graduates to locate in communities of less than 100,000 population.

Table 4 indicates the distribution of the 1925 graduates according to the college from which they graduated. Here the tabulation has been carried out in somewhat greater detail. Thus, there is indicated, for instance, for each college the number of 1925 graduates carrying on what might be considered a distinctly rural practice, that is, those who are practicing in communities of less than 5000 population. In general, as might be expected, a higher per cent of the graduates of the colleges located in the metropolitan centers tend to locate in the larger communities.

Table 5 shows, according to colleges, the number and per cent of 1925 graduates practicing in the same state and in the same city in which their college is located. As one would expect, the majority of graduates tend to locate in the same state in which the college from which they graduated is located. In addition to the two schools for the colored, notable exceptions are found in the case of Johns Hopkins, Harvard, Iowa, Maryland, McGill, Medical College of Virginia and Yale.

Table 6 shows the general distribution of the 1925 graduates according to states, together with a similar distribution of the total population of the United States. This table seems to indicate that California

and New York received far more than their fair share of the graduates of this year. In connection with this table it is important to bear in mind that population is only one of many factors involved in the distribution of physicians.

Table 7 shows the distribution by cities of the 1925 graduates practicing in communities of 500,000 and over, together with the population distribution in these cities. The table suggests that Boston, Detroit,

Table 7. 1925 medical college graduates practicing in cities of 500,000 population and over and the population distribution in such cities in 1930*.

| City | 1925 graduates | | Population: 1930* | |
|---|---|---|---|---|
| | Number | Per cent distribution | Number | Per cent distribution |
| All large cities | 1,020 | 100.0 | 22,267,049 | 100.0 |
| Baltimore | 35 | 3.4 | 804,874 | 3.6 |
| Boston | 54 | 5.3 | 781,188 | 3.5 |
| Buffalo | 26 | 2.6 | 573,076 | 2.6 |
| Chicago | 139 | 13.6 | 3,376,438 | 15.2 |
| Cleveland | 32 | 3.1 | 900,429 | 4.0 |
| Detroit | 82 | 8.0 | 1,568,662 | 7.0 |
| Los Angeles | 52 | 5.1 | 1,238,048 | 5.6 |
| Milwaukee | 26 | 2.6 | 578,249 | 2.6 |
| Montreal | 26 | 2.6 | 810,925 | 3.6 |
| New York City | 340 | 33.2 | 6,930,446 | 31.1 |
| Philadelphia | 77 | 7.5 | 1,950,961 | 8.8 |
| Pittsburgh | 32 | 3.1 | 669,817 | 3.0 |
| San Francisco | 46 | 4.5 | 634,394 | 2.8 |
| St. Louis | 33 | 3.2 | 821,960 | 3.7 |
| Toronto | 20 | 2.0 | 627,582 | 2.8 |

*The population of cities in the United States is given in accordance with the Federal Census of 1930, while the population for Canadian cities was taken from the Canadian Census of 1931.

New York and San Francisco received more than their fair share of those practicing in the larger communities.

It is rather interesting to note, as shown in Table 8, that while 99 per cent of the 1925 graduates of American colleges located in continental United States, only 59.6 of the graduates of Canadian colleges located in Canada, 39 per cent locating in the United States.

Type of Practice.—As in the previous study, the 1925 graduates were classified according to the nature of their practice as follows: those in general practice; those in general practice but giving special attention to a specialty; those definitely limiting their practice to a specialty; and those not practicing medicine. As shown in Table 9, there is little dif-

ference between the figures of the 1925 and the 1920 graduates. What little difference there is suggests a possible decreasing tendency to specialize within the first six years after graduation. Surely any increasing tendency toward such specialization would be evident in this tabulation.

Table 8. 1925 graduates of American and Canadian medical colleges, according to country in which they are practicing.

| Country | 1925 graduates | | | |
|---|---|---|---|---|
| | American colleges | | Canadian colleges | |
| | Number | Per cent distribution | Number | Per cent distribution |
| All countries | 2,948 | 100.0 | 282 | 100.0 |
| Continental United States | 2,918 | 99.0 | 110 | 39.0 |
| Canada | 1 | * | 168 | 59.6 |
| Outlying United States territories | 25 | 0.9 | 1 | 0.4 |
| British West Indies | - | - | 3 | 0.7 |
| Other foreign countries | 4 | 0.1 | 1 | 0.4 |

*Less than one-tenth of one per cent.

In the questionnaires those who had not limited their practice to a specialty were asked in regard to their plans in regard to such limitation. This data was tabulated and Table 10 shows the 1925 graduates who, if they carry out their present plans, will have limited their practice to a

Table 9. Medical college graduates, according to type of practice: 1915, 1920, and 1925.

| Type of practice | 1915 graduates | | 1920 graduates | | 1925 graduates | |
|---|---|---|---|---|---|---|
| | Number | Per cent distribution | Number | Per cent distribution | Number | Per cent distribution |
| All types | 1,834 | 100.0 | 1,947 | 100.0 | 3,230 | 100.0 |
| General practice | 412 | 22.5 | 454 | 23.3 | 811 | 25.1 |
| General practice with special attention to specialty | 653 | 35.6 | 786 | 40.4 | 1,307 | 40.5 |
| Limited to specialty | 751 | 40.9 | 682 | 35.0 | 1,097 | 34.0 |
| Not practicing | 18 | 1.0 | 15 | 0.8 | 15 | 0.5 |

specialty eleven years after graduation, as compared with the 1915 and 1920 graduates. Here, again, there is little difference between the figures for the graduates of 1920 and 1925, although in this table both these years show a distinctly higher per cent of specialists than for 1915.

Table 11 shows for the three years studied those who have already

limited their practice to a specialty, together with those who plan on such limitation at any future time. Here there seems to be evident a

Table 10. 1925 medical college graduates who will have limited practice to a specialty eleven years after graduation, as compared with 1915 and 1920 graduates.

| | 1915 graduates | 1920 graduates | 1925 graduates |
|---|---|---|---|
| Total | 1,834 | 1,947 | 3,230 |
| Graduates now limiting practice | 751 | 682 | 1,097 |
| 1920 graduates giving special attention to specialty in 1926 who contemplated limitation within five years | | 218 | |
| 1920 graduates doing general practice in 1926 who contemplated limitation within five years | | 71 | |
| Total 1920 graduates who planned to limit their practice by 1931 | | 971 | |
| 1925 graduates now giving special attention to specialty who contemplate limitation within five years | | | 371 |
| 1925 graduates now doing general practice who contemplate limitation within five years | | | 179 |
| Total 1925 graduates who plan to limit their practice by 1936 | | | 1,647 |
| Percentage of graduates specializing 11 years after graduation | 40.9 | 49.9 | 51.0 |

slightly decreased tendency toward specialization on the part of the 1925 graduates as a whole as compared with the 1920 graduates. All

Table 11. Medical college graduates who will eventually limit their practice to a specialty if they carry out their present plans: 1915, 1920, and 1925.

| | 1915 graduates | 1920 graduates | 1925 graduates |
|---|---|---|---|
| Total | 1,834 | 1,947 | 3,230 |
| Graduates now limiting practice | 751 | 682 | 1,097 |
| Graduates giving special attention to specialty who plan limitation | 365 | 544 | 826 |
| Graduates doing general practice who plan limitation | 100 | 180 | 344 |
| Total graduates limiting or planning on limitation of practice | 1,216 | 1,406 | 2,267 |
| Percentage of graduates eventually limiting to specialty | 66.2 | 72.2 | 70.2 |

the data in regard to specialization suggest that the tendency toward specialization has reached and possibly passed its zenith.

Table 12 shows, according to the college from which they gradu-

Table 12. Number and percentage of medical college graduates who have limited their practice to a specialty, according to college: 1915, 1920, and 1925.

| Medical college | 1915 graduates | | | 1920 graduates | | | 1925 graduates | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Limited to specialty | | Total | Limited to specialty | | Total | Limited to specialty | |
| | | Number | Per cent of total | | Number | Per cent of total | | Number | Per cent of total |
| All medical colleges | 1,834 | 751 | 40.9 | 1,947 | 682 | 35.0 | 3,230 | 1,097 | 34.0 |
| Albany | 38 | 15 | * | 16 | 7 | * | 13 | 6 | * |
| Alberta | ** | | | ** | | | 7 | 1 | * |
| Arkansas | 11 | 3 | * | - | - | - | 21 | 5 | * |
| Baylor | 10 | 3 | * | 23 | 7 | * | 25 | 8 | * |
| Boston | 14 | 7 | * | 8 | 3 | * | 36 | 10 | * |
| Buffalo | 42 | 15 | * | 42 | 10 | * | 38 | 7 | * |
| California | 10 | 6 | * | 15 | 7 | * | 42 | 12 | * |
| Cincinnati | ** | | | ** | | | 57 | 24 | 42.1 |
| Colorado | 7 | 3 | * | 15 | 6 | * | 26 | 11 | * |
| Columbia | 62 | 29 | 46.8 | 76 | 28 | 36.8 | 77 | 27 | 35.1 |
| Cornell | 10 | 6 | * | 29 | 11 | * | 41 | 15 | * |
| Creighton | 30 | 6 | * | 20 | 4 | * | 28 | 9 | * |
| Dalhousie | ** | | | ** | | | 28 | 9 | * |
| Detroit | 28 | 5 | * | 29 | 9 | * | 22 | 5 | * |
| Emory | 98 | 33 | 33.7 | 24 | 9 | * | 49 | 16 | * |
| Georgetown | 21 | 10 | * | 9 | 2 | * | 29 | 10 | * |
| George Washington | 18 | 6 | * | 16 | 6 | * | 36 | 18 | * |
| Georgia | 8 | 2 | * | 13 | 6 | * | 19 | 4 | * |
| Hahnemann | 14 | 3 | * | 26 | 4 | * | 35 | 4 | * |
| Harvard | 64 | 42 | 65.6 | 74 | 41 | 55.4 | 96 | 67 | 69.8 |
| Howard | 11 | 1 | * | 13 | 2 | * | 41 | - | - |
| Illinois | 50 | 17 | 34.0 | 47 | 13 | * | 83 | 26 | 31.3 |
| Indiana | 26 | 12 | * | 31 | 9 | * | 73 | 24 | 32.9 |
| Iowa | 20 | 11 | * | 45 | 16 | * | 68 | 38 | 50.6 |
| Jefferson | 105 | 40 | 38.1 | 130 | 30 | 23.1 | 100 | 17 | 17.0 |
| Johns Hopkins | 73 | 56 | 76.7 | 84 | 64 | 76.2 | 60 | 43 | 71.7 |
| Kansas | 8 | 5 | * | 16 | 4 | * | 23 | 8 | * |
| Laval | ** | | | ** | | | 17 | 6 | * |
| Long Island | 52 | 15 | 28.8 | 55 | 8 | 14.5 | 73 | 9 | 12.3 |
| Louisville | 39 | 12 | * | 16 | 2 | * | 51 | 12 | 23.5 |
| Loyola | ** | | | ** | | | 30 | 7 | * |
| Manitoba | ** | | | ** | | | 30 | 8 | * |
| Marquette | 20 | 5 | * | 11 | 6 | * | 29 | 2 | * |
| Maryland | 49 | 18 | * | 43 | 17 | * | 62 | 14 | 22.2 |
| McGill | ** | | | ** | | | 59 | 23 | 39.0 |
| Medical Evangelists | 9 | 3 | * | 12 | 1 | * | 50 | 5 | 10.0 |
| Meharry | 25 | - | - | 10 | - | - | 19 | - | - |
| Michigan | 35 | 22 | * | 58 | 22 | 37.9 | 121 | 49 | 40.5 |
| Minnesota | 30 | 12 | * | 58 | 26 | 44.8 | 72 | 33 | 45.8 |
| Montreal | ** | | | ** | | | 39 | 16 | * |
| Nebraska | 7 | 2 | * | 37 | 7 | * | 81 | 22 | 27.2 |
| New York Homeopathic | ** | | | ** | | | 16 | 1 | * |
| New York University (Bellevue) | 71 | 28 | 39.4 | 72 | 11 | 15.3 | 74 | 16 | 21.6 |
| Northwestern | 29 | 13 | * | 52 | 19 | 36.5 | 80 | 28 | 35.0 |
| Ohio State | 35 | 16 | * | 20 | 5 | * | 62 | 13 | 20.6 |
| Oklahoma | 13 | 4 | * | 11 | 4 | * | 19 | 9 | * |
| Oregon | 10 | 3 | * | 10 | 3 | * | 42 | 16 | * |
| Pennsylvania | 46 | 24 | * | 103 | 34 | 33.0 | 100 | 40 | 40.0 |
| Pittsburgh | 9 | 3 | * | 31 | 10 | * | 36 | 9 | * |
| Rush | 73 | 35 | 47.9 | 85 | 41 | 48.2 | 87 | 33 | 38.0 |
| St. Louis | 33 | 18 | * | 49 | 11 | * | 65 | 16 | 24.6 |
| South Carolina | 19 | 8 | * | 12 | 3 | * | 26 | 12 | * |
| Stanford | 14 | 5 | * | 16 | 9 | * | 22 | 15 | * |
| Syracuse | 12 | 5 | * | 34 | 14 | * | 35 | 8 | * |
| Temple | ** | | | ** | | | 29 | 4 | * |
| Tennessee | 43 | 17 | * | 11 | 7 | * | 47 | 19 | * |
| Texas | 29 | 15 | * | 47 | 17 | * | 46 | 23 | * |
| Toronto | ** | | | ** | | | 86 | 31 | 36.0 |
| Tufts | 38 | 11 | * | 50 | 11 | 22.0 | 79 | 24 | 30.4 |
| Tulane | 59 | 20 | 33.9 | 58 | 22 | 37.9 | 66 | 24 | 36.4 |
| Vanderbilt | 59 | 25 | 42.4 | 18 | 6 | * | 35 | 14 | * |
| Vermont | 32 | 12 | * | 21 | 5 | * | 24 | 8 | * |
| Virginia (Medical College) | 63 | 19 | 30.2 | 16 | 5 | * | 45 | 17 | * |
| Virginia (University) | 20 | 13 | * | 26 | 19 | * | 48 | 24 | * |
| Washington | 28 | 9 | * | 37 | 18 | * | 56 | 28 | 50.0 |
| Western Ontario | ** | | | ** | | | 16 | 2 | * |
| Western Reserve | 30 | 13 | * | 44 | 13 | * | 32 | 12 | * |
| Women's Medical College | 18 | 5 | * | 7 | 2 | * | 17 | 3 | * |
| Yale | 7 | 5 | * | 16 | 5 | * | 37 | 18 | * |

*Per cent not shown when base is less than 50. **Data not available.

Table 13. Number and percentage of medical college graduates who have limited their practice to a specialty, according to college: 1915, 1920, and 1925 (combined).

| Medical college | 1915, 1920, and 1925 graduates: Total | Limited to specialty: Number | Limited to specialty: Per cent of total |
|---|---|---|---|
| All medical colleges | 7,011 | 2,530 | 36.1 |
| Albany | 67 | 28 | 41.8 |
| Alberta | 7* | 1 | ** |
| Arkansas | 32 | 8 | ** |
| Baylor | 58 | 18 | 31.0 |
| Boston | 58 | 20 | 34.5 |
| Buffalo | 122 | 32 | 26.2 |
| California | 67 | 25 | 37.3 |
| Cincinnati | 57* | 24 | 42.1 |
| Colorado | 46 | 20 | ** |
| Columbia | 215 | 84 | 39.1 |
| Cornell | 80 | 32 | 40.0 |
| Creighton | 78 | 19 | 24.4 |
| Dalhousie | 28* | 9 | ** |
| Detroit | 79 | 19 | 24.1 |
| Emory | 171 | 58 | 33.9 |
| Georgetown | 59 | 22 | 37.3 |
| George Washington | 70 | 30 | 42.9 |
| Georgia | 40 | 12 | ** |
| Hahnemann | 75 | 11 | 14.7 |
| Harvard | 234 | 150 | 64.1 |
| Howard | 65 | 3 | 4.6 |
| Illinois | 180 | 56 | 31.1 |
| Indiana | 130 | 45 | 34.6 |
| Iowa | 133 | 65 | 48.9 |
| Jefferson | 335 | 87 | 26.0 |
| Johns Hopkins | 217 | 163 | 75.1 |
| Kansas | 47 | 17 | ** |
| Laval | 17* | 6 | ** |
| Long Island | 180 | 32 | 17.8 |
| Louisville | 106 | 26 | 24.5 |
| Loyola | 30* | 7 | ** |
| Manitoba | 30* | 8 | ** |
| Marquette | 60 | 13 | 21.7 |
| Maryland | 184 | 49 | 31.8 |
| McGill | 59* | 23 | 39.0 |
| Medical Evangelists | 71 | 9 | 12.7 |
| Meharry | 54 | - | - |
| Michigan | 214 | 93 | 43.5 |
| Minnesota | 160 | 71 | 44.4 |
| Montreal | 39* | 16 | ** |
| Nebraska | 128 | 31 | 24.8 |
| New York Homeopathic | 18* | 1 | ** |
| New York Univ.(Bellevue) | 227 | 55 | 25.3 |
| Northwestern | 161 | 60 | 37.5 |
| Ohio State | 117 | 34 | 29.1 |
| Oklahoma | 43 | 17 | ** |
| Oregon | 62 | 22 | 35.5 |
| Pennsylvania | 249 | 98 | 39.4 |
| Pittsburgh | 76 | 22 | 29.2 |
| Rush | 245 | 109 | 44.5 |
| St. Louis | 147 | 45 | 30.6 |
| South Carolina | 57 | 23 | 40.4 |
| Stanford | 52 | 29 | 55.8 |
| Syracuse | 81 | 27 | 33.3 |
| Temple | 29* | 4 | ** |
| Tennessee | 101 | 43 | 42.6 |
| Texas | 122 | 55 | 45.1 |
| Toronto | 86* | 31 | 36.0 |
| Tufts | 167 | 46 | 27.5 |
| Tulane | 183 | 66 | 36.1 |
| Vanderbilt | 112 | 45 | 40.2 |
| Vermont | 77 | 25 | 32.5 |
| Virginia (Medical College) | 124 | 42 | 33.9 |
| Virginia (University) | 91 | 56 | 61.5 |
| Washington | 121 | 55 | 45.5 |
| Western Ontario | 16* | 2 | ** |
| Western Reserve | 106 | 38 | 35.8 |
| Woman's Medical College | 42 | 10 | ** |
| Yale | 60 | 28 | 46.7 |

*Data available for 1925 only.

**Per cent not shown when base is less than 50.

ated, those who, up to the time the data were collected, had limited their practice. As in the previous study, there is considerable variation in the per cent of graduates of the various colleges who have limited

Table 14 Number and percentage of medical college graduates who have limited their practice to a specialty, according to the community in which 1915 and 1920 graduates were practicing in 1926, and the community in which 1925 graduates were practicing in 1931.

| Community | 1915 graduates | | | 1920 graduates | | | 1925 graduates | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Limited to specialty | | Total | Limited to specialty | | Total | Limited to specialty | |
| | | Number | Per cent of total | | Number | Per cent of total | | Number | Per cent of total |
| All communities | 1,634 | 751 | 40.9 | 1,947 | 682 | 35.0 | 3,230 | 1,097 | 34.0 |
| Cities of 500,000 population and over | 516 | 270 | 52.3 | 616 | 254 | 41.2 | 1,020 | 409 | 40.1 |
| Cities of 100,000 to 500,000 population | 347 | 189 | 54.5 | 352 | 157 | 44.6 | 673 | 317 | 47.1 |
| Balance of states | 940 | 276 | 29.4 | 943 | 263 | 27.9 | 1,524 | 370 | 24.3 |
| Cities of 50,000 to 100,000 | * | | | * | | | 236 | 95 | 40.3 |
| Cities of 25,000 to 50,000 | * | | | * | | | 206 | 74 | 35.9 |
| Cities of 10,000 to 25,000 | * | | | * | | | 278 | 86 | 30.9 |
| Villages of 5,000 to 10,000 | * | | | * | | | 178 | 39 | 21.9 |
| Villages of less than 5,000 | * | | | * | | | 626 | 76 | 12.1 |
| Army and Navy (only address) | - | - | - | - | - | - | 2 | - | - |
| Foreign communities | 31 | 16 | ** | 36 | 8 | ** | 11*** | 1 | ** |

*Data not available. **Per cent not shown when base is less than 50.
***Only those foreign communities whose size was not known are included in this group.

their practice. On the other hand, the tendency toward specialization on the part of the graduates from individual colleges for the three years studied shows in general little change. Because of this I felt justified in combining the data for 1915, 1920 and 1925 in regard to limitation of practice according to colleges. Table 13 gives the results of this tabulation and shows that more than 50 per cent of the graduates of certain colleges have already limited their practice to a specialty. Johns Hopkins shows the highest per cent of specialization (75.1), while Harvard shows 64.1 per cent and the University of Virginia 61.5 per cent. Aside from the schools for colored students, the College of Medical Evangelists, the New York Homeopathic Medical College, Temple University and University of Western Ontario show the smallest per cent of specialists.

Table 14 shows the number and per cent of graduates who had limited their practice according to the population of the communities in which the 1915 and 1920 graduates were practicing in 1926 and the 1925 graduates were practicing in 1931. The detail data of the 1915

and 1920 graduates for the smaller communities were not tabulated. As is to be expected, with a decrease in size of the community there is a

Table 15. Number and percentage of 1925 medical college graduates practicing in cities of 500,000 population and over who have limited their practice to a specialty, according to city.

| City | 1925 graduates | | |
|---|---|---|---|
| | Total | Limited to specialty | |
| | | Number | Per cent of total |
| All large cities | 1,020 | 409 | 40.1 |
| Baltimore | 35 | 24 | * |
| Boston | 54 | 41 | 75.9 |
| Buffalo | 26 | 7 | * |
| Chicago | 139 | 60 | 43.2 |
| Cleveland | 32 | 13 | * |
| Detroit | 82 | 33 | 40.2 |
| Los Angeles | 52 | 27 | 51.9 |
| Milwaukee | 26 | 6 | * |
| Montreal | 36 | 13 | * |
| New York City | 340 | 100 | 29.4 |
| Philadelphia | 77 | 19 | 24.7 |
| Pittsburgh | 32 | 14 | * |
| San Francisco | 46 | 27 | * |
| St. Louis | 33 | 17 | * |
| Toronto | 30 | 8 | * |

*Per cent not shown when base is less than 50.

Table 16. Medical college graduates who have limited their practice to a specialty, according to years of general practice: 1915, 1920, and 1925.

| Years of general practice | 1915 graduates | | 1920 graduates | | 1925 graduates | |
|---|---|---|---|---|---|---|
| | Number | Per cent distribution | Number | Per cent distribution | Number | Per cent distribution |
| Total | 731 | 100.0 | 682 | 100.0 | 1,097 | 100.0 |
| No general practice | 227 | 30.9 | 348 | 51.0 | 886* | 83.4 |
| Under two years | 48 | 6.4 | 91 | 13.4 | 133 | 12.1 |
| Two to four years | 168 | 22.4 | 183 | 26.8 | 274 | 25.0 |
| Five to nine years | 254 | 33.8 | 41 | 6.0 | 40 | 3.6 |
| Ten years and over | 36 | 4.8 | - | - | - | - |
| Time not reported | 18 | 2.4 | 19 | 2.8 | 64 | 5.8 |

*182 of this number reported special postgraduate work in their special field in addition to a general internship.

decreased tendency toward specialization. A considerable number of those in the smaller communities indicated in this table as limiting their

practice to a specialty are occupying full time positions in various public and private institutions. If these were eliminated, these smaller communities would show a much smaller percentage of specialists.

Table 15 shows the tendency toward specializing on the part of those 1925 graduates practicing in communities of 500,000 and over. Of the 1020 practicing in these communities, 409, or 40.1 per cent, have limited their practice as compared with 34 per cent of all of the graduates of this year. Those locating in Boston and Baltimore showed the highest per cent limiting their practice, and those locating in Philadelphia and Milwaukee the lowest per cent.

Table 16 shows the graduates who have limited their practice to a specialty according to the number of years they spent in general practice before such limitation. Although the table indicates a possible increased tendency to specialize without previous general practice, it does not necessarily mean that those doing so are less well prepared. Of the 586 1925 graduates limiting to a specialty without previous general practice, 182 voluntarily reported special postgraduate work in their special field, in addition to a general internship.

As in the previous study, the classification of the specialties to which the graduates had limited their practice presented considerable difficulty. It is recognized that the list of specialties used is in many ways unsatisfactory. However, in order to have comparable data, the same basis for classification was used as that employed in the study of the 1915 and 1920 graduates. In some instances, the specialties reported involved only a narrow field in the specialty under which they appear in the tabulation. There were also certain bizarre combinations of specialties which were utterly unclassifiable.

Table 17 shows those who have limited their practice according to the specialty chosen. Although there were no striking differences in the figures for the 1925 graduates and those for the 1915 and 1920 graduates, certain tendencies are suggested by the tabulation. For instance, eye, ear, nose and throat seems to be losing some of its popularity as a specialty, as does also pediatrics, which showed a marked increase with the 1920 graduates as compared with the 1915 graduates.

There is some encouragement for the public health agencies in the fact that of the 1925 graduates who have limited their practice to a specialty, 4.6 per cent chose public health as compared with the corresponding figure of 3.2 per cent for the 1920 graduates. In spite of the recent widespread mental hygiene developments throughout the country, the per cent of 1925 graduates limiting their practice to neuropsychiatry is somewhat smaller than that of the 1920 graduates.

Table 17 Medical college graduates who have limited their practice, according to specialty: 1915, 1930, and 1935.

| Specialty | 1915 graduates | | 1930 graduates | | 1935 graduates | |
|---|---|---|---|---|---|---|
| | Number | Per cent distribution | Number | Per cent distribution | Number | Per cent distribution |
| All specialties | 781 | 100.0 | 682 | 100.0 | 1,097 | 100.0 |
| Eye, ear, nose and throat | 189 | 22.5 | 134 | 19.2 | 183 | 16.7 |
| Internal medicine | 136 | 16.1 | 125 | 18.5 | 190 | 17.5 |
| Surgery | 152 | 20.2 | 104 | 15.5 | 203 | 18.5 |
| Pediatrics | 45 | 6.0 | 77 | 11.3 | 109 | 9.9 |
| Gynecology and obstetrics | 44 | 5.9 | 46 | 6.7 | 75 | 6.8 |
| Neuropsychiatry | 35 | 4.7 | 45 | 6.6 | 64 | 5.8 |
| Genito-urinary | 40 | 5.3 | 40 | 5.9 | 53 | 4.7 |
| Laboratory and radiology | 58 | 7.7 | 60 | 8.8 | 96 | 8.8 |
| Public health | 26 | 3.5 | 22 | 3.2 | 50 | 4.6 |
| Industrial medicine and surgery | 18 | 2.4 | 9 | 1.3 | 15 | 1.4 |
| Syphilology and dermatology | 7 | 0.9 | 15 | 2.2 | 31 | 2.8 |
| All other specialties | 21 | 2.8 | 13 | 1.9 | 29 | 2.7 |

Table 18 1935 graduates of American and Canadian medical colleges who have limited their practice, according to specialty.

| Specialty | 1935 graduates | | | |
|---|---|---|---|---|
| | American colleges | | Canadian colleges | |
| | Number | Per cent distribution | Number | Per cent distribution |
| All specialties | 1,001 | 100.0 | 96 | 100.0 |
| Eye, ear, nose, and throat | 171 | 17.1 | 12 | 12.5 |
| Internal medicine | 177 | 17.7 | 13 | 13.5 |
| Surgery | 192 | 19.2 | 11 | 11.5 |
| Pediatrics | 103 | 10.3 | 6 | 6.3 |
| Gynecology and obstetrics | 71 | 7.1 | 4 | 4.2 |
| Neuropsychiatry | 43 | 4.3 | 21 | 21.9 |
| Genito-urinary | 51 | 5.1 | 1 | 1.0 |
| Laboratory and radiology | 88 | 8.8 | 8 | 8.3 |
| Public health | 41 | 4.1 | 9 | 9.4 |
| Industrial medicine and surgery | 11 | 1.1 | 4 | 4.2 |
| Syphilology and dermatology | 30 | 3.0 | 1 | 1.0 |
| All other specialties | 23 | 2.3 | 6 | 6.3 |

In Table 18 is shown a comparison of the 1925 graduates of American and Canadian colleges who have limited their practice according to specialties. Although the number of graduates of the Canadian colleges is relatively small, the table does suggest certain rather striking tenden-

Table 19. Medical college graduates, according to type of salaried position: 1915, 1920, and 1925.

| Type of salaried position | 1915 graduates | | 1920 graduates | | 1925 graduates | |
|---|---|---|---|---|---|---|
| | Number | Per cent distribution | Number | Per cent distribution | Number | Per cent distribution |
| Total | 1,834 | 100.0 | 1,947 | 100.0 | 3,230 | 100.0 |
| Full-time salaried position | 278 | 15.2 | 343 | 17.6 | 570 | 17.6 |
| Part-time salaried position | 301 | 16.4 | 388 | 19.9 | 629 | 19.5 |
| No salaried position | 1,255 | 68.4 | 1,217 | 62.5 | 2,031 | 62.9 |

cies. Neuropsychiatry seems to be five times more popular with the graduates of Canadian colleges; public health twice as popular; and industrial medicine four times as popular.

SALARIED POSITIONS.—Table 19 shows for the three years studied the number and per cent of graduates holding full-time or part-time

Table 20. 1925 graduates of American and Canadian medical colleges, according to kind of salaried position.

| Kind of salaried position | 1925 graduates | | | |
|---|---|---|---|---|
| | American colleges | | Canadian colleges | |
| | Number | Per cent distribution | Number | Per cent distribution |
| Total | 2,948 | 100.0 | 282 | 100.0 |
| With full-time salaried position | 493 | 16.7 | 77 | 27.3 |
| With part-time salaried position | 584 | 19.8 | 45 | 16.0 |
| With no salaried position | 1,871 | 63.5 | 160 | 56.7 |

salaried positions. The percentages for the 1925 and 1920 graduates are practically identical. Thus, although it is entirely safe to say that under present conditions more than one out of every six medical college graduates is destined to hold a full-time salaried position, it is difficult to say how much of this is due to new positions that are being created.

In Table 20 is shown a comparative tabulation of the 1925 graduates of American and Canadian colleges as to salaried positions. The returns

thus show a much higher per cent of graduates of Canadian colleges holding full-time salaried positions.

In Table 21 is shown the number and per cent of graduates holding salaried positions listed according to the type of practice reported. The figures for the 1925 graduates show the same general trend as do those for the 1920 graduates, with a slightly larger per cent of those who

Table 21. Number and percentage of medical college graduates, holding salaried positions, according to type of practice: 1915, 1920, and 1925.

| Type of practice | 1915 graduates | | | 1920 graduates | | | 1925 graduates | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | With any salaried position | | Total | With any salaried position | | Total | With any salaried position | |
| | | Number | Per cent of total | | Number | Per cent of total | | Number | Per cent of total |
| All types | 1,834 | 579 | 31.6 | 1,947 | 730 | 37.5 | 3,230 | 1,199 | 37.1 |
| General practice | 412 | 81 | 19.7 | 464 | 120 | 25.9 | 811 | 179 | 22.1 |
| General practice with special attention to specialty | 653 | 171 | 26.2 | 786 | 249 | 31.7 | 1,307 | 415 | 31.8 |
| Limited to specialty | 751 | 321 | 42.7 | 682 | 356 | 52.2 | 1,097 | 602 | 54.9 |
| Not practicing | 18 | 6 | * | 15 | 5 | * | 15 | 3 | * |
| | Total | With full-time salaried position | | Total | With full-time salaried position | | Total | With full-time salaried position | |
| | | Number | Per cent of total | | Number | Per cent of total | | Number | Per cent of total |
| All types | 1,834 | 278 | 15.2 | 1,947 | 342 | 17.6 | 3,230 | 570 | 17.6 |
| General practice | 412 | 28 | 6.8 | 464 | 37 | 8.0 | 811 | 52 | 6.4 |
| General practice with special attention to specialty | 653 | 57 | 8.7 | 786 | 66 | 8.4 | 1,307 | 111 | 8.5 |
| Limited to specialty | 751 | 188 | 25.0 | 682 | 234 | 34.3 | 1,097 | 405 | 36.9 |
| Not practicing | 18 | 5 | * | 15 | 5 | * | 15 | 2 | * |
| Type of practice | Total | With part-time salaried position | | Total | With part-time salaried position | | Total | With part-time salaried position | |
| | | Number | Per cent of total | | Number | Per cent of total | | Number | Per cent of total |
| All types | 1,834 | 301 | 16.4 | 1,947 | 388 | 19.9 | 3,230 | 629 | 19.5 |
| General practice | 412 | 53 | 12.9 | 464 | 83 | 17.9 | 811 | 127 | 15.7 |
| General practice with special attention to specialty | 653 | 114 | 17.5 | 786 | 183 | 23.3 | 1,307 | 304 | 23.3 |
| Limited to specialty | 751 | 133 | 17.7 | 682 | 122 | 17.9 | 1,097 | 197 | 18.0 |
| Not practicing | 18 | 1 | * | 15 | - | - | 15 | 1 | * |

*Per cent not shown when base is less than 50.

have limited their practice to a specialty holding full-time salaried positions.

Table 22 shows those who report limiting their practice and holding part-time or full-time salaried positions according to the specialty reported. The figures for the 1925 graduates correspond closely with those for 1915 and 1920 which show an appreciable number from each of the specialties in full-time salaried positions and hence not in the private practice of their specialty.

Table 23 shows the various fields in which those holding salaried positions are employed. A relatively much larger number of 1925 than 1920 graduates are in the Army and Navy. The number holding full-time positions with city and county health departments is also relatively slightly increased but not encouragingly so. Twenty-one of the 1925 graduates now have full-time fellowships.

Table 22. Medical college graduates limiting their practice and holding full-time and part-time salaried positions, according to specialty: 1915, 1920, and 1925.

| Specialty | 1915 graduates | | | 1920 graduates | | | 1925 graduates | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | With full-time positions | With part-time positions | Total | With full-time positions | With part-time positions | Total | With full-time positions | With part-time positions |
| All specialties | 751 | 188 | 133 | 682 | 234 | 122 | 1,097 | 405 | 197 |
| Eye, ear, nose and throat | 169 | 14 | 21 | 124 | 55 | 11 | 183 | 27 | 27 |
| Internal medicine | 136 | 31 | 26 | 125 | 8 | 22 | 190 | 66 | 44 |
| Surgery | 152 | 36 | 35 | 106 | 34 | 21 | 203 | 68 | 41 |
| Pediatrics | 45 | 3 | 14 | 77 | 12 | 28 | 109 | 13 | 34 |
| Gynecology and obstetrics | 44 | 3 | 6 | 46 | 5 | 12 | 75 | 10 | 18 |
| Neuropsychiatry | 35 | 20 | 3 | 45 | 32 | 7 | 64 | 52 | 6 |
| Genito-urinary | 40 | 2 | 10 | 40 | 6 | 10 | 52 | 12 | 5 |
| Laboratory and radiology | 58 | 28 | 12 | 60 | 43 | 9 | 96 | 70 | 12 |
| Public health | 26 | 24 | 1 | 22 | 22 | - | 50 | 49 | 1 |
| Industrial medicine and surgery | 18 | 9 | 2 | 9 | 6 | - | 15 | 13 | - |
| Syphilology and dermatology | 7 | 1 | 3 | 15 | 1 | 2 | 31 | 1 | 7 |
| Hospital administration | 8 | 8 | - | 6 | 6 | - | 7 | 7 | - |
| All other specialties | 13 | 9 | - | 7 | 3 | - | 22 | 17 | 2 |

The number and per cent of 1925 graduates holding full-time and part-time salaried positions according to the college from which they graduated is shown in Table 24.

## Summary

Data secured from 1925 graduates tend to emphasize the reliability of the data used in my previous study.

There is an apparent tendency for men to enter on the practice of medicine at a somewhat older age than previously. Although this is due, in part, to increased requirements, it is also due, in part, to the fact that many men do not begin the study of medicine until they are past 25 years of age.

More graduates are practicing in the larger communities than would seem justifiable according to the population distribution in these communities. With modern methods of transportation, this distribution may not be as serious as it would at first appear.

Table 23. Medical college graduates holding salaried positions, according to kind of position: 1915, 1920, and 1925.

| Salaried position | 1915, 1920, and 1925 graduates | | 1915 graduates | | 1920 graduates | | 1925 graduates | |
|---|---|---|---|---|---|---|---|---|
| | Full-time | Part-time | Full-time | Part-time | Full-time | Part-time | Full-time | Part-time |
| All salaried positions | 1,190 | 1,318 | 278 | 301 | 342 | 388 | 570 | 629 |
| Hospitals and institutions | 307 | 127 | 62 | 31 | 99 | 45 | 146 | 51 |
| Tuberculosis sanatoria | 51 | 9 | 12 | - | 11 | 5 | 28 | 4 |
| Hospitals for insane | 22* | - | * | * | * | * | 22 | - |
| Superintendents of hospitals and sanatoria | 15* | - | * | * | * | * | 15 | - |
| Hospitals (not elsewhere classified) | 201 | 96 | 47 | 26 | 81 | 33 | 73 | 37 |
| Other institutions | 18 | 22 | 3 | 5 | 7 | 7 | 8 | 10 |
| Medical college (teaching and research) | 87 | 182 | 21 | 46 | 34 | 59 | 32 | 77 |
| Hospital and medical college | 43 | 36 | 4 | 10 | 17 | 6 | 22 | 20 |
| Public health | 117 | 205 | 26 | 48 | 33 | 56 | 58 | 101 |
| United States Public Health Service | 33 | 10 | 14 | 1 | 7 | 2 | 12 | 7 |
| State health departments | 16 | 11 | 2 | 4 | 6 | 6 | 8 | 1 |
| City and county health departments | 41 | 134 | 7 | 39 | 12 | 45 | 22 | 50 |
| Other government departments** | 10 | 44 | - | 2 | 4 | 3 | 6 | 39 |
| Public health (not otherwise specified) | 17 | 6 | 3 | 2 | 4 | - | 10 | 4 |
| Group practice*** | 126 | 7 | 13 | - | 37 | 1 | 56 | 6 |
| Industrial | 95 | 207 | 21 | 56 | 23 | 66 | 51 | 85 |
| Associate or assistant to other physician | 58 | 40 | 8 | 4 | 24 | 14 | 26 | 22 |
| Army | 64 | 1 | 40 | 1 | 1 | - | 23 | - |
| Navy | 52 | 1 | 21 | 1 | 10 | - | 21 | - |
| Veterans' Bureau | 43 | 18 | 20 | 11 | 12 | 6 | 11 | 1 |
| Fellowship (on salary) | 22 | 2 | - | - | 1 | - | 21 | 2 |
| Laboratory | 33 | 28 | 11 | 3 | 8 | 11 | 14 | 14 |
| Insurance**** | 20 | 54 | 7 | 12 | 5 | 13 | 8 | 29 |
| Medical research (not elsewhere classified) | 16 | 6 | 2 | 2 | 6 | 1 | 8 | 3 |
| School medical inspection | 14 | 132 | 3 | 27 | 7 | 45 | 4 | 60 |
| Medical missionary | 11 | - | 2 | - | 7 | - | 2 | - |
| Clinic service | 9 | 77 | - | 13 | 3 | 23 | 6 | 41 |
| All other positions | 36 | 61 | 1 | 4 | - | 4 | 35 | 53 |
| Two or more positions | 32 | 109 | 11 | 22 | 6 | 30 | 15 | 57 |
| Nature of position not reported | 25 | 25 | 5 | 10 | 9 | 8 | 11 | 7 |

*In 1915 and in 1920 hospital superintendents and physicians employed in hospitals for the insane were included with those employed in hospitals (not elsewhere classified).

**Includes state, county, and city departments, other than health departments, and Federal departments, other than the Public Health Service, Veterans' Bureau, Army, and Navy.

***Includes only those graduates engaged in group practice on a salary basis.

****Includes ten 1925 graduates engaged in workmen's compensation activities.

Table 34. Number and percentage of 1935 medical college graduates holding full-time and part-time salaried positions, according to medical college.

| Medical college | Total | 1935 graduates | | | |
|---|---|---|---|---|---|
| | | With full-time salaried positions | | With part-time salaried positions | |
| | | Number | Per cent of total | Number | Per cent of total |
| All colleges | 3,230 | 570 | 17.6 | 629 | 19.5 |
| Albany | 13 | 2 | * | 2 | * |
| Alberta | 7 | - | - | 1 | * |
| Arkansas | 21 | 2 | * | 7 | * |
| Baylor | 26 | 6 | * | 3 | * |
| Boston | 36 | 4 | * | 12 | * |
| Buffalo | 38 | 4 | * | 11 | * |
| California | 42 | 4 | * | 11 | * |
| Cincinnati | 87 | 12 | 21.1 | 14 | 24.4 |
| Colorado | 26 | 6 | * | 6 | * |
| Columbia | 77 | 4 | 5.2 | 28 | 36.4 |
| Cornell | 41 | 3 | * | 8 | * |
| Creighton | 28 | 3 | * | 5 | * |
| Dalhousie | 28 | 9 | * | 3 | * |
| Detroit | 22 | 2 | * | 4 | * |
| Emory | 49 | 4 | * | 7 | * |
| Georgetown | 29 | 4 | * | 7 | * |
| George Washington | 36 | 7 | * | 15 | * |
| Georgia | 19 | 11 | * | 1 | * |
| Hahnemann | 35 | 2 | * | 8 | * |
| Harvard | 96 | 21 | 21.9 | 25 | 26.0 |
| Howard | 41 | 1 | * | 4 | * |
| Illinois | 83 | 15 | 18.1 | 16 | 19.3 |
| Indiana | 73 | 14 | 19.2 | 10 | 13.7 |
| Iowa | 68 | 27 | 39.7 | 8 | 11.8 |
| Jefferson | 100 | 7 | 7.0 | 32 | 32.0 |
| Johns Hopkins | 60 | 22 | 36.7 | 12 | 20.0 |
| Kansas | 23 | 7 | * | 6 | * |
| Laval | 17 | 2 | * | 4 | * |
| Long Island | 73 | - | - | 13 | 17.8 |
| Louisville | 51 | 7 | 13.7 | 13 | 25.5 |
| Loyola | 30 | 1 | * | 8 | * |
| Manitoba | 30 | 6 | * | 5 | * |
| Marquette | 39 | 1 | * | 9 | * |
| Maryland | 62 | 6 | 9.7 | 14 | 22.6 |
| McGill | 69 | 19 | 30.5 | 5 | 8.5 |
| Medical Evangelists | 50 | 8 | 16.0 | 2 | 4.0 |
| Meharry | 19 | - | - | 2 | * |
| Michigan | 121 | 26 | 21.5 | 19 | 15.7 |
| Minnesota | 72 | 28 | 38.9 | 13 | 17.1 |
| Montreal | 39 | 12 | * | 2 | * |
| Nebraska | 81 | 22 | 27.2 | 8 | 9.9 |
| New York Homeopathic | 16 | 1 | * | 1 | * |
| New York University (Bellevue) | 74 | 5 | 6.8 | 13 | 17.6 |
| Northwestern | 80 | 9 | 11.3 | 14 | 17.5 |
| Ohio State | 62 | 8 | 12.9 | 13 | 21.0 |
| Oklahoma | 19 | 5 | * | 1 | * |
| Oregon | 42 | 9 | * | 12 | * |
| Pennsylvania | 100 | 33 | 33.0 | 33 | 33.0 |
| Pittsburgh | 36 | 3 | * | 8 | * |
| Rush | 87 | 12 | 13.8 | 27 | 31.0 |
| St. Louis | 65 | 4 | 6.2 | 8 | 12.3 |
| South Carolina | 26 | 3 | * | 5 | * |
| Stanford | 22 | 5 | * | 6 | * |
| Syracuse | 35 | 2 | * | 10 | * |
| Temple | 29 | 3 | * | 5 | * |
| Tennessee | 47 | 15 | * | 5 | * |
| Texas | 46 | 8 | * | 7 | * |
| Toronto | 86 | 25 | 29.1 | 22 | 25.6 |
| Tufts | 79 | 10 | 12.9 | 19 | 24.1 |
| Tulane | 66 | 8 | 12.1 | 11 | 16.7 |
| Vanderbilt | 35 | 5 | * | 2 | * |
| Vermont | 24 | 1 | * | 4 | * |
| Virginia (Medical College) | 45 | 10 | * | 4 | * |
| Virginia (University) | 45 | 16 | * | 4 | * |
| Washington | 56 | 15 | 26.8 | 8 | 14.3 |
| Western Ontario | 16 | 5 | * | 3 | * |
| Western Reserve | 32 | 10 | * | 6 | * |
| Women's Medical | 17 | 4 | * | 4 | * |
| Yale | 37 | 7 | * | 4 | * |

*Per cent not shown when base is less than 50.

On the other hand, although 47.7 per cent of the population of the United States is in communities of less than 5,000, only 19 per cent of the 1925 graduates are practicing in such communities.

There is a wide variation on the part of the various medical colleges as far as furnishing rural practitioners is concerned.

About 50 per cent of medical college graduates practice in the same state as that in which their college is located, with about 25 per cent practicing in the same city.

Of the 1925 graduates, 99 per cent of those from American colleges practice in the United States while only 59 per cent from the Canadian colleges are practicing in Canada.

The tendency of the 1925 graduates to limit their practice to a specialty is approximately the same as in the case of the 1920 graduates. Approximately 35 per cent of the graduates of these years have limited to a specialty within six years after graduation. Slightly more than 70 per cent look forward to ultimate specialization.

Slightly more than half of those limiting to a specialty within six years after graduation do so without having had any experience in general practice.

Seventeen and six-tenths per cent of the graduates of 1920 and 1925 were occupying full-time salaried positions six years after graduation.

It is with pleasure that I acknowledge the assistance of Miss Mary V. Dempsey in the statistical study of the data assembled.

# Development of the Clinical Concept in Teaching Preventive Medicine*

W. S. LEATHERS
Dean, Vanderbilt University School of Medicine, Nashville, Tenn.

Much progress has been made during the past decade in devising ways and means for teaching preventive medicine and public health to medical students. A number of papers have been published on this subject since the enunciation of the concept by Sir George Newman[1], in 1923, that the "preventive idea" should permeate instruction throughout the medical curriculum. There is also a growing appreciation in the United States and Great Britain[2] of the value and necessity of teaching medical students the preventive aspects of medicine, and of having practitioners apply preventive measures more uniformly in routine practice. As a consequence several medical schools in this country have established departments of hygiene and preventive medicine during recent years and a few are in the process of organizing full-time departments for teaching this important phase of medical service.

The question of overcrowding the curriculum is frequently emphasized in discussions on medical education, and it is also pointed out that more flexibility in the curriculum would develop initiative and stimulate a greater sense of responsibility on the part of the student. I am entirely in accord with this point of view, and I do not want to be understood as advocating more hours for the curriculum, but I do wish to direct attention to the need for a readjustment of the instruction offered and a change in the attitude of both faculty and students so as to utilize in a better way the facilities which are available and which may be provided for teaching preventive medicine and public health to undergraduate medical students. There is need for a change of viewpoint, a new interest, and a better understanding concerning this problem.

## Trends in Medical Education

If one can correctly interpret the trends in medical education it is difficult to escape the conclusion that we are entering a new era in the

*From the Department of Preventive Medicine and Public Health, Vanderbilt University School of Medicine.

**Read at the Forty-second Annual Meeting of the Association of American Medical Colleges, held in New Orleans, Nov. 30, Dec. 1 and 2, 1931.

1. NEWMAN, G.: The Permeation of the Medical Curriculum by Preventive Teaching. *Brit. M. J.*, 2:347, 1923.

2. Report of the Committee appointed by the Council of the Society of Medical Officers of Health (England). The Place of Preventive Medicine in the Medical Curriculum. *Public Health*, 43:253-260, 1930.

practice of medicine. This point of view has been stressed effectively by Dr. George E. Vincent[3], in an address delivered before the New York Academy of Medicine on "The Doctor and The Changing Order," in which he states in summary: "It looks as if society means to insist upon a more effective organization of medical service for all groups of people, upon distribution of the costs of sickness over large numbers of families and individuals, and upon making prevention of disease a controlling purpose. Just how these ends will be gained only a very wise or a very foolish man would venture to predict. One thing seems fairly certain: In the end society will have its way."

This significant and far-reaching statement indicates unmistakably the problems confronting medical educators and the organized profession. The questions involved are intricate and difficult of solution and much confusion exists among physicians concerning some of the trends in medical practice. Readjustments in medical practice are inevitable and changes must come to provide a more adequate medical service for different groups of people. Obviously, these adjustments should be made so as to provide adequate medical and public health service with due regard for the ideals, initiative and independence which the profession of this country has always so highly prized in the practice of medicine.

### Relation of Physician to Public Health Agencies

An important factor in the solution of this problem is the function of the physician in relation to public health agencies in the prevention and treatment of disease. The leaders of the profession have, as a group, expressed a consistent and sustained interest in public health measures, but I think it is generally agreed that there is need for a more effective integration of preventive and curative medicine in practice and a better understanding between public health agencies and the medical profession. I am convinced that medical schools can make a large contribution toward accomplishing this result by providing proper facilities for teaching the preventive aspects of medicine. Much will be gained by developing in medical students an interested and sympathetic attitude with reference to public health practice by making them more familiar with the technic which should be employed in practice for the prevention and control of disease from the standpoint of the individual patient, the family, the home and its environment, and the community; and, also, by emphasizing to medical students their proper relationship to official and nonofficial health agencies.

3. Vincent, George E.: The Doctor and the Changing Order. *Bull. New York Acad. Med.*, 2:6-14, 1926.

## Facilities in Medical Schools for Teaching Preventive Medicine and Public Health

As a member of the Committee on Public Health Organization of the White House Conference and chairman of the Subcommittee on Training of Personnel, I considered it of fundamental importance that information be obtained concerning the facilities available in medical schools for the instruction of undergraduate medical students in hygiene and preventive medicine. It is from this group that health officers must be recruited as well as a large percentage of those who are to fill positions in institutional and specialized phases of public health. Moreover, I realize that no greater contribution could be made in maintaining proper health standards than by enlisting the intelligent interest and cooperation of the organized medical profession.

For these reasons an effort was made to obtain as accurate information as possible from the seventy-six medical schools of the United States relative to the status of the departments of hygiene and preventive medicine, or at least what was being done concerning the instruction of medical students in preventive medicine and public health. The only method at my disposal to secure this information was to send out well-prepared forms requesting facts which might be used as an index of what is being done at present in this phase of instruction. I wish to present a brief analysis of the data which were secured from sixty-nine of the seventy-six medical schools.

An effort was made to elicit information on the following points: (1) whether hygiene and preventive medicine is classed as a major subject; (2) the number of hours devoted to didactic and to field instruction; (3) whether the teaching of preventive medicine is administered by a separate department; (4) whether this subject is taught by a separate teaching staff; (5) the number of full-time and part-time instructors; (6) the budget; (7) the general content of the course. It is difficult to obtain accurate and satisfactory information without an opportunity to make a careful survey by personal contact, the data obtained are, nevertheless, of much interest and indicate reasonably well the present status of teaching this subject to medical students in the respective schools of medicine.

Of the sixty-nine schools from which replies were obtained, eight give only the first two years of the regular medical course and, therefore, are not considered in this discussion as the time during these years is largely devoted to fundamental sciences and an introduction to physical diagnosis and clinical medicine. One school in the process of organization was also omitted in the analysis of the data.

In the remaining sixty schools, twenty-nine designated hygiene and preventive medicine as a major subject; twenty-four designated it as a minor subject; the replies from six were indefinite; and one school gives only the last two years of the medical course and makes no provision for public health instruction. Fifty-five schools reported essentially didactic teaching. The least number of hours devoted to such instruction is 11 and the highest 184. Five schools reported either no didactic instruction or the replies were unsatisfactory. Thirty-eight schools indicated that some field work in public health was required, the minimum number of hours being 3, the maximum 129 and the average 42; twenty-two made indefinite reports or indicated that no field work was being given. Instruction in hygiene and preventive medicine is given by a separate department in only twenty-five schools and in thirty-three it has no separate departmental status; replies on this point from two schools were indefinite.

In twenty-eight schools the faculty of the department of hygiene and preventive medicine is separate, while in twenty-nine it is combined with some other department, usually bacteriology. The replies from three schools were not definite. Ten schools employ from one to seven persons who devote all or the major part of their time to the teaching of hygiene and preventive medicine; seventeen indicated that the staff responsible for such instruction devotes the major part of its time to the teaching of some other subject, usually bacteriology and immunology. Such instruction as may be given in the remaining thirty-three schools is given by part-time personnel supplied usually from the state and local health departments.

Thirty-four schools reported separate budgets, of which, it appears that a large part is used for the teaching of preventive medicine and public health. The budgets of the departments of hygiene and preventive medicine in seven range from $10,000 to $32,000; all but one of the remaining twenty-seven schools have budgets of less than $5,000. Incidentally, in twelve schools the budgets are apparently encumbered with some other major activity, usually bacteriology. It should be noted that twenty-six schools have no special budget for teaching hygiene and preventive medicine.

The content of the course could not be estimated with any degree of exactness. General sanitation and control of communicable diseases seemed to be stressed and the other phases of hygiene appear to be largely neglected. In the majority of schools the instruction is of a didactic type and doubtless the student is taught in an uninteresting, desultory and ineffective way; in some instances the didactic teaching is supplemented

by visits to contagious disease hospitals, child welfare centers, water treatment plants, sewage disposal systems, dairies, pasteurization plants and to state and local health departments. In the main, however, one would conclude from the data obtained that in the majority of medical schools there is no particular emphasis laid upon well-organized and systematic instruction which may be considered comparable to the kind of teaching done in the older and the better established subjects, such as anatomy, physiology, pathology, surgery and medicine. There is a lack of emphasis on one or more of the following methods of instruction: field demonstrations, laboratory exercises including epidemiology, case studies, sanitary surveys, seminar assignments and periodic health examinations. Except in a few institutions, there is but little cooperation and correlation between the department of hygiene and preventive medicine and the strictly clinical departments.

### Analysis of the Data

There are obvious inconsistencies and contradictions in the data. For instance, in twenty-nine schools hygiene and preventive medicine is classed as a major subject; twenty-nine also claim to have separate teaching personnel but only nine of these have full-time teachers whose major interest appears to be the teaching of preventive medicine and public health. Only seven of these schools have budgets exceeding $5,000 which are not encumbered by other major activities, such as bacteriology.

It may be stated that of the sixty medical schools included in this analysis as many as twelve may be regarded as having provided for teaching hygiene and preventive medicine in a manner comparable to the methods employed in teaching such subjects as anatomy, physiology, medicine and surgery. The instruction in the remainder of these schools appears from the data presented to be unsystematic and poorly organized, and this phase of teaching seems to have received less attention than many subjects of relatively minor importance in the medical curriculum. In only a small number of schools does it seem that a broad concept of public health is developed or that the subject is being treated in a manner commensurate with its great importance. The frequent combination of preventive medicine and public health with bacteriology, and even pathology, does not seem logical or sound from the pedagogic point of view since a modern public health program is a dynamic function more closely related to the clinical branches of the medical curriculum.

### Inadequacy of Instruction

The data presented in this discussion indicate that at the present time many medical students are being graduated inadequately prepared

with reference to this important phase of medical service. It is not being done and in the nature of things cannot be expected in the way that it should be done only through the interest and efforts of other members of the faculty upon the theory that the preventive idea should permeate the curriculum. Our knowledge concerning hygiene and preventive medicine has advanced by leaps and bounds during the past fifty years and unless the responsibility of teaching this subject is placed on one who is prepared and who has a clinical conception of public health, it is not likely that such instruction will make the proper appeal to medical students. It is evident that in a number of schools the faculty, generally speaking, is placing more than usual emphasis on teaching the preventive aspects of medicine in the respective courses of instruction and in clinics; but this is confined, so far as I can determine, to those medical schools in which there are reasonably well-organized departments of hygiene and preventive medicine. Judging from my experience, this objective can only be accomplished effectively by the vitalizing influence of a department of preventive medicine and public health with all-time personnel and adequate facilities for teaching and research. To enlist and maintain the interest and cooperation of other members of the faculty in teaching the preventive aspects of medicine is the goal desired, but it is not readily attained.

### Improvement in Instruction

It is encouraging to know that much improvement has been made in recent years in the methods employed for teaching hygiene and preventive medicine to medical students. In the Harvard Medical School[4], in addition to a systematic course of lectures each student is required to make a sanitary survey of some town or city and make a careful report thereon as a requirement for graduation. Every student is expected to use his initiative and resourcefulness in securing information in analyzing the data and in making recommendations. A series of special clinics is also conducted in such a way as to emphasize the desirability of integrating preventive and curative medicine in practice. In Yale University, in addition to the course of lectures and field work, a series of studies (case studies) is being made by fourth-year students of patients who come for treatment in the out-patient service and wards of the hospital. Dr. Ira V. Hiscock[5] states: "The purpose of these studies is to give the medical student a clearer concept of the varying factors underlying the immediate acute condition of illness or incapacity seen in the

4. Rosenau, Milton J.: The Sanitary Survey as an Instrument of Instruction in Medical Schools. Methods and Problems of Medical Education, Rockefeller Foundation, Second Series, 1924.

5. Hiscock, Ira V.: Clinical Case Studies as Instruments in the Teaching of Public Health. *J. Amer. M. Assn.*, 96:970-972, 1931.

dispensary or hospital and especially to provide opportunity to consider the causes operating in a case and the methods by which the illness might have been prevented." These studies prove of much value to the patient, the student and the clinic, and also afford opportunity for the student to become acquainted with the health activities of the community as conducted by public health agencies.

A paper was published in the *Journal of the American Medical Association*[6], in 1927, setting forth the plan of organization and methods employed in teaching preventive medicine and public health in the Vanderbilt Medical School. In this discussion attention was called to the correlation which exists between the departments of bacteriology and preventive medicine, to the coordination between the departments of medicine and preventive medicine in making case studies by students which are presented in combined clinics, and to the regular course for the fourth year students, consisting of 110 hours, 66 of which are used for field demonstrations and epidemiological studies and seminars at which the students present the results of special assignments. I may add that a course on parasitic diseases has since been organized, involving protozoology, helminthology and medical entomology, which offers an opportunity to teach laboratory diagnostic methods and to inform the student concerning modes of transmission, preventive measures and the use of therapeutic agents as control measures[7]. This course is given during the third trimester of the second year.

It is of interest to note that since the organization of the department of preventive medicine six years ago not less than 5 per cent of the graduates of the Vanderbilt Medical School have gone into public health. In contrast to this only 2.8 per cent of the Vanderbilt graduates of the previous six years are now engaged in public health. Although the instruction for undergraduate medical students should be developed so as to meet the needs of the practicing physician, unless a department makes a contribution in stimulating interest on the part of promising undergraduate medical students in public health as a possible career it does not fulfill one of its most important obligations to the public welfare.

### Effective Methods of Instruction

One of the most effective methods of teaching the medical student preventive medicine is to coordinate the work of the department of preventive medicine with the out-patient service of the hospital. In the Vanderbilt Medical School a member of the department of preventive

6. Leathers, W. S.: The Place of Preventive Medicine in the Medical School. *J. Amer. M. Assn.*, 88:973, 1927.
7. Meleney, Henry E.: The Teaching of Medical Parasitology. *J. Amer. M. Assn.*, 90:1188-1189, 1928.

medicine spends three mornings each week in the out-patient service of the hospital, participating in clinical work and serving as consultant on questions of a public health nature which may arise in dealing with patients. A clinic is also conducted each year, with the assistance of fourth-year medical students, for making a periodic physical examination of the employees of the hospital. These examinations afford opportunity to emphasize the care required in diagnostic procedure to detect disease in its incipiency.

In addition, the staff of the hospital makes reports to the department of preventive medicine of cases of communicable diseases which have been admitted, and reports are in turn made by the department of preventive medicine to the health officer of the county or city in which the patient lives. This affords a means of coordinating the work of the Medical School with the activities of health agencies in the community and state. A member of the teaching personnel of the department of preventive medicine may also accompany the staff of the department of medicine in making the weekly ward rounds, which affords opportunity for making comments which create interest and enlist cooperation on the part of the clinical staff.

## Conclusions

The newer methods of approach should be used to enlist the interest of both the students and the faculty in the preventive aspects of disease and in problems involving public health relationship. It is the clinical rather than the didactic approach which, I think, is of the greatest importance in instructing medical students in this subject. There must be a correlation between the teaching of this subject and the clinical branches of the curriculum if the interest of the student is to be enlisted and maintained. The student should be given the opportunity to grasp the cardinal facts that curative and preventive medicine can not be divorced from one another and that as a practitioner he will have responsibilities to his patient and to the community and state which will require the application of the best available knowledge in the prevention as well as in the treatment of disease.

## Bibliography


Balfour, Andrew: Through the Maze of Medicine. *Lancet*, 2:1047-1052, 1926.

Dean, H. R.: A Review of the Medical Curriculum. *Brit. M. J.*, 2:341-345, 1930.

FitzGerald, J. G.: General Outline of the Problem of Training Health Workers. *Brit. M. J.*, 2:631-633, 1930.

Haythorn, Samuel R.: Cooperative Plan of Teaching Preventive Medicine. Proc. 35th Annual Meeting, Assn. Amer. M. Coll., p. 50-58, 1925.

Kaplan, Harry E.: A Plan for Training the Medical Student in General Practice. Proc. Congr. on M. Educ., M. Lic. & Hosp., Chicago, 1931.

LEATHERS, W. S.: Vanderbilt University School of Medicine Department of Preventive Medicine and Public Health. Methods and Problems of Medical Education, The Rockefeller Foundation, Thirteenth Series, 1929.

LEATHERS, W. S.: A New Departure in the Medical Curriculum. *Southern M. J.*, 23:967-968, 1930.

LEATHERS, W. S. and KELLER, A. E.: Training Medical Students in the Practice of Preventive Medicine. *Southern M. J.*, 21:253-263, 1928.

LYSTER, ROBERT A.: Training in Preventive Medicine in the Medical Schools. *Lancet*, 1:57-59, 1930.

RAPPLEYE, W. C.: Current Problems of Medical Education. *J. Amer. M. Assn.*, 94:915-917, 1930.

## Discussion

DR. E. C. DICKSON, Stanford University School of Medicine, San Francisco: We have been going through the throes of organization of a Department of Public Health and Preventive Medicine at Stanford Medical School, and our department is one of those mentioned by Dr. Leathers in which there is a close association with bacteriology. We do not teach the medical bacteriology—that is done in the Department of Bacteriology at Stanford University—but we do the routine bacteriology for the Stanford Hospitals and clinics in San Francisco. I am not sure that this is as much of a handicap as Dr. Leathers suggests—in fact, I asked for such an arrangement in order that our department might have an official and active contact with the clinical services, and, I believe, that if one can avoid being overwhelmed with the routine, such a contact is desirable.

It has been necessary for us to depend for our field work on the requirement of a sanitary survey of a community, and we have been delighted with the cordial cooperation of the health officers of California and adjoining states. We believe that our students are acquiring a point of view of the aims and problems of the health authorities which will result in their being more sympathetic and cooperative with the health officers when they go out into practice.

We have not yet succeeded in obtaining as close teaching cooperation with the clinical services as we had hoped, nor as has been obtained by Dr. Leathers at Vanderbilt, but we are giving courses in diagnostic parasitology and in the laboratory diagnosis and preventive measures of other communicable diseases and we hope that in time we may be able to do better.

DR. G. CANBY ROBINSON, Cornell University Medical School, New York City: One point Dr. Leathers made that should be emphasized. I had the opportunity of cooperating with my former colleague in this matter from the end of the hospital physician representing the Department of Medicine.

We all agree that public health and preventive medicine must be closely coordinated with the clinical fields, as it really belongs in the group of clinical subjects rather than with laboratory subjects. Of course, there is an obvious relationship, but it is not a clinical subject in the sense that we are dealing with patients who are in bed. But, it is a subject dealing with the living human being.

There are several ways in which this relationship may be fostered, and Dr. Leathers mentioned one, namely, the reporting of all communicable diseases

from the clinical departments to the department of public health. That idea may be enlarged upon a bit. In schools related to large hospitals and large clinical communities, there is a real place for a local board of health, so to speak, and the Department of Preventive Medicine and Public Health can and should serve as the board of health for that community of hospitals, and in that way the problems that arise should be made known to the Department of Public Health and their cooperation sought, and their study of these problems encouraged.

I have often spoken of the experience we had in the first year at Nashville, which was a very interesting one. We had five cases of typhoid fever come in from a country district, five adults from one family. Dr. Leathers' department immediately became interested in this family epidemic. They went out 25 miles into the country and studied the whole surroundings of this family, and then presented a very beautiful study of the epidemiology of this particular occurrence. Then we were able to show these cases in a clinic and follow up the clinic by the public health aspects of that particular family epidemic.

That, to my mind, is of very great importance in bringing home to the students the relation of public health to the everyday work they will do. There is no doubt that experiences like that have an enormous influence in creating an interest in the problems of public health in relating it closely in the minds of students of clinical medicine which, after all, is one of the most important matters in the furtherance of knowledge and interest in this field of public health and preventive medicine.

Dr. H. G. Weiskotten, Syracuse University College of Medicine, Syracuse, N. Y.: For about fifteen years we have required sanitary surveys from all students before graduation. We feel they are well worth while and are continuing them.

During the past few years we have done two things to try to give the students the proper viewpoint toward preventive medicine and public health. In Syracuse, during the past eight or nine years, we have been subjected to a health demonstration. We have survived it, and as a result we have a rather highly developed city health department, one interested in teaching. For two years we have assigned our fourth year students in groups to field work in the city health department in the same way that they are assigned to their clinical clerkships in the hospital.

Getting my cue from a conversation with Dr. Winslow, last year I tried another experiment. I asked each member of the fourth year class to file with me a written report on some case that had been assigned to him as a clinical clerk in the hospital. This report was to be based on a personal investigation of the home, living and working conditions of that patient, with the idea in mind of trying to discover what it was in the life of that patient that resulted in his becoming a patient in the hospital; next, to determine whether or not home conditions were proper for convalescence, and whether the living and working conditions were proper for the patient to return to after convalescence. I find this has been well worth while, and we are continuing it this year.

Dr. D. J. Davis, University of Illinois, College of Medicine, Chicago: At the University of Illinois we have recently organized in the outpatient department, a clinic in preventive medicine, two hours a week, where cases of partic-

ular interest are referred from the dispensary and from the health department of the state. This clinic is supervised by a member of the medical school who is also in the State Department of Health. We have found it of real service in industrial cases. Instruction of the students is an important part of that work.

Last year we had a Faculty conference at which each department in the medical school gave a brief report of the teaching done in preventive work. I was surprised at the interest taken in this problem by the members of the clinical departments, and I was interested in their reaction. Surgeons and obstetricians remarked, "Surgery and obstetrics are primarily preventive medicine. A good part of what we teach and what we do is preventive medicine." It is true that in the Department of Obstetrics much time has been devoted to the prevention of puerperal sepsis, eclampsia, etc., and to a study of ways and means whereby the death rate can be reduced. The clinicians have their big preventive problems and those of us in this field should not even imply that this is our problem entirely.

# Dentistry: The Errant Branch. Shall Medicine Re-adopt It?*

F. T. VAN BEUREN, JR.
Associate Dean, Columbia University College of Physicians and Surgeons, New York City

About one hundred years ago, dentistry, whose ranks had theretofore been recruited largely from the medical profession, announced itself as a definite specialty outside of medicine by organizing, in Baltimore, the first dental faculty in the United States. The three members of this dental faculty sought admission to the Faculty of Medicine of the so-called University of Maryland. Their request was rejected—not because of any quarrel between medicine and dentistry, formerly parts of the same whole—but for two very good reasons: one, that medicine at that time discouraged any form of specialization, and the other, because there was definite personal ill-feeling among the members of that medical faculty toward one member of the new dental faculty, a man who had formerly been a trouble maker in their own school.

## Progress of Dentistry

From that time forward dentistry hoed its own row. It organized its own faculties, built its own schools, planned its own curricula. It recruited its own teaching staff, at first partly from the medical profession, but later largely from among the graduates of its own schools. No longer weighed down by the traditions of the medical profession it advanced rapidly along narrow and more definite lines, losing gradually its biological background and fostering its mechanical necessities, until it finally developed a beauty of technique that it would be difficult to overpraise.

But, unfortunately, in discarding its medical traditions, in burying its biological background beneath a superstructure of mechanics, in ornamenting its technique with porcelain and platinum and gold, dentistry had done itself a grievous injury. It had, if you will permit a figure of speech, lost its soul. Fixing its gaze too steadily on material progress it had lost its spiritual significance, perhaps even its recollection of any spiritual connection with the betterment of mankind. Fixing its attention too singly on mechanical ends it had lost even its biological relationship to the brave attempt of medicine to improve the body as a whole. Moreover, dentistry had forgotten the ideal which medicine,

*Read at the Forty-second Annual Meeting of the Association of American Medical Colleges, held at New Orleans, Nov. 30, Dec. 1 and 2, 1931.

with all its faults, still held, the ideal of service. Or, perhaps, it would be more accurate to say that it had traded the ideal of service to others for the ideal of service to itself. And while medicine still thought mostly of what it could give, dentistry had begun, unconsciously, perhaps, to concentrate chiefly on what it could get. In a word, while medicine remained a profession, dentistry had become a business.

I do not mean to say that there was no leaven in this lump. Just as in medicine at its lowest and most material period, there were still men of fine character, high ideals and broad education, so, at this period of which I speak (perhaps 1870-1900), there were in dentistry men of high attainments and wide sympathies, men who still practiced dentistry as a profession rather than engaging in it as a business. Some of these men had taken the medical as well as the dental doctorate and were in a position to compare or contrast the background and the ideals of the two educational groups. They did not hesitate to do this at the expense of dentistry's common repute for they were convinced that if any improvement were to be made it must be preceded by a general recognition of what they felt were the evils to be eradicated.

### Organization of Dental Faculties Association

These men either already had or succeeded in securing university affiliation for their schools and they formed a group very similar to the Association of American Medical Colleges. It was called the Dental Faculties Association of American Universities and had for its general aim the reorganization of dental education along university lines, the return to a biological rather than a mechanical conception of dentistry and the recovery of its cultural background.

They also sought and desired to reimplant in dentists the professional ideal which had been exchanged gradually for the conception of dentistry as a business. Nor were they alone in this desire and effort. Interested and sympathetic members of the medical profession, courageously risking the dangers of that old proverb about people who live in glass houses, reinforced the demands of the better dentists for improvement in dentistry.

### Dentistry and Medical Specialties

Beginning sixty years ago with Oliver Wendell Holmes at the first commencement of the first University Dental School (Harvard's), medical men have pointed out the similarity of the proper aims of dentistry and of the accepted specialties of medicine. For the past thirty years they have been pointing out also the discrepancy between the educational

requirements of dentistry and of the accepted medical specialties. And beginning with William Hunter they have been emphasizing the dangers that have accrued from a practice of dentistry based on a mechanical rather than on a biological conception of odontology.

### Dentistry a Specialty of Medicine

Very latterly there has been renewed agitation by some of the foremost dental educators for the readoption of dentistry by medicine with the slogan declaring that "Dentistry is a specialty of medicine." This call for adoption appears to be of a serious nature, a call from high ground and well-founded, in spite of the fact that, so far as dentistry, in general, is concerned, it appears also to be a voice crying in the wilderness.

In medical quarters it has met with a rather sympathetic reception and some of our foremost medical educators have not alone inclined their ears but have lent their voices in antiphonous response. Winternitz, and others, have declared their agreement in principles with the announced desire of certain dental educators to incorporate dental education into the medical school, to revive its cultural and biological background, to renew its professional ideals and to announce it publicly as a specialty of medicine.

Here, then, we have something serious to consider. Something of real significance. Something, perhaps, for the future to applaud or deplore when it reads back into the medical history of the early twentieth century. We have, then, in effect, the proposed return of the prodigal, the prodigal who departed from our home of Aesculapius one hundred years ago.

How shall we greet him? Why, sympathetically, of course, and in the friendliest fashion. And how shall we meet his request? Ah! That is the question to be considered before it is answered. For this is not the prodigal of the older parable, sick, poor, hungry and afraid. This prodigal is a strong fellow, with a bold address, clothed in splendid raiment, fitted with the finest dentures and jingling money in both pockets. His hat is tipped a trifle, and one notices, at times, just the slightest swagger in his walk. In certain lights he wears the aspect of nobility; but then, again, at times his speech betrays a common origin.

He says he wants little but seems to ask much, and he certainly has not been dining on husks! Now he appears modest as a violet, and anon his air assumes a trace of truculence. He gives, in brief, the impression of ill ease, the suspicion that he is not, so to speak, at one with himself. He may be a splendid fellow with a heart of gold, but then, again, he

may not be just the right example for our littles ones at home. We have heard of him often, during his long absence, but we have seen little of him and spoken with him hardly at all. Only recently have his family and ours been on really friendly terms.

Would it be discourteous to ask him to wait while we talk it over together among ourselves? Would it be unkind to say: "Friend, be seated, and be at ease. Your face pleaseth us and we like well your speech. It may be, indeed, that you are our long lost son, and that our house and our arms will soon be open to you. But there have certain tidings reached us, both from your friends and from our own, that we must first consider and there has been much loose talk about. So that we were fain, first, to examine the credentials that you bear, making sure that this is just and that is right and everything is fair. And while we crave your pardon for the slight delay we know you would not have us welcome an imposter in your place."

So, leaving our visitor at his ease and well entertained in the meantime, as we hope, let us consider his requests and examine his credentials as fairly and carefully as we can and in a spirit of friendly accommodation. Now, what is dentistry, what does it ask of medicine and how shall we answer its requests?

## What Is Dentistry?

Dentistry claims to be a profession and would have this claim allowed by others, although dentists talk to each other about their "business." Dentistry is, in large part, a fine handicraft and does work of a technical beauty comparable to the jeweler's art, but it has too often failed to consider whether its result will ultimately benefit or harm the individual thus decorated.

Dentistry has been too much concerned with cosmetic effect and too little with systemic effect; for the flashing beauty of a golden crown cannot offset the danger of the infected root it conceals. In its pursuit of mechanics and of art dentistry has tended largely to forsake biological science and its research along biological lines has been insignificant in amount and in effect. Less hardily than medicine has dentistry resisted the economic pressure toward commercialization that is so notable in this age of commerce and communications. Moreover, dentistry, as practiced, is a narrow specialization of effort that does not induce close reasoning nor broad consideration but leads rather to insistence on the importance of small details to the obscuration of deeper significance. It does not offer the same implications of wide interests that medicine does, and, in consequence, it does not, in general, attract the same type of

student. And this is most important: for the men who carry on any business or profession mould its features, color its appearance and typify its spirit.

### Limitations of Dentistry

These limitations and tendencies are recognized by many dentists. They are deplored by the better type of men and ignored by the poorer type. Men of the lowest intellectual capacity fail to recognize them and so deny their statement as a false imputation. There is, however, I am inclined to believe, one aspect of dentistry as compared with medicine that nearly all dentists recognize—namely that it stands somewhat lower than does medicine in the public esteem and that its practitioners are, in general, less highly respected. Otherwise in their proposals for improvement in dentistry there would be less mention of public respect and esteem to be gained by their accomplishment.

We all know that the public makes mistakes. But I am talking of things as they are, not things as they ought to be. And the fact itself remains that the public holds medicine higher than dentistry. There is, I believe, good reason for this public attitude in the intellectual, cultural and educational background of medicine as compared with dentistry. Curiously enough, too, the public respects a man who is willing to sacrifice his own interests for theirs—even though they may believe him a fool (in a sense) for doing it. And no thinking person can deny that for the last fifty years, at least, medicine has been trying to put itself out of business for the sake of the public.

### Improvement in Dentistry

Nothing has been said in all this about the remarkable improvement in dentistry that has taken place, largely, no doubt, as a result of the efforts of those same fine men (and others like them) who now demand that medicine adopt dentistry. And while the progress it has made is indubitable and very admirable and is clearly and enthusiastically set forth by those whose slogan is "Dentistry for the dentists," specific mention of it here has consciously been minimized.

It should be pointed out that this is not because we fail to recognize and applaud it. It is rather because we are not now weighing the value of dentistry, as such, but are trying to weigh the value of its claim to the title "a specialty of medicine" and to measure the validity of its appeal that dental education should be incorporated into the school of medicine.

Dentistry undoubtedly started as a specialty of medicine. But in its progress between narrow boundaries, lacking opportunity to spread, it

grew so far away from the parent stem that its origin was difficult at times to recognize. It grew so far that it became at one time practically all specialty and no medicine. Latterly, however, we are persuaded that it has become rooted at this opposite end and is growing back toward the parent stem.

But is it not still inverted? Does it not still begin at the wrong end to be "a specialty of medicine"? That is the question. To my mind this question has been answered satisfactorily for the present. And this is the answer. There is still so much specialty and so little medicine about dentistry that I think we would hardly be justified in calling it a specialty of medicine at present. If and when it begins to turn out graduates with the same basic medical training, clinical and preclinical, that the unspecialized medical graduate receives before he is allowed to start his special training, we will unquestionably begin to regard dentistry as a specialty of medicine.

Until that time I believe that ophthalmologists, otolaryngologists, dermatologists, urologists and other accepted specialists in medicine have a right to oppose this definition. For men who have spent four college years in preparing for medical school and four years in getting the M. D. degree, in addition to the varying number of years of special study required for recogntion as a specialist in medicine, may well offer objection against giving to a man who has had a briefer and narrower educational training the same recognition that they have had to work so long and so hard for.

### Objections to Dentistry's Proposal

That is one objection to dentistry's proposals and it seems to me a serious one and well-grounded. But there is at least one other objection and, in order to appreciate it, we must consider what effect dentistry's proposal, if accepted and carried through, would have on medical education. In effect, these proposals boil down to the following scheme: that the medical course as now generally arranged be so changed that the last two of its four years would be years of specialization. In brief, all students, whatever their election for the future, would take during the first two years the same basic course in the so-called medical sciences. At the end of that preliminary canter, the Baccalaureate of Medicine would be bestowed on them. During the last two years each man would follow his predilection. One would select a general course; another would limit his enquiries to the field of the internist; another would confine himself to courses directly applicable to surgery; still others would limit their studies to ophthalmologic, dermatologic, neu-

rologic and urologic relationships, while others, again, would specialize in what its promoters like to call stomatology, a kind of superdentistry.

At the end of the four years study, each student, no matter what had been his choice for the last two years of his course, would receive the Doctor's degree in medicine. It is obvious that these graduates would have a narrower medical foundation to rear their specialties on, and it is equally obvious that none of them would be as well qualified for the practice of general medicine as are our present graduates.

### Revision of Licensing Examinations

It is also obvious that few, if any, of them could pass the present type of licensing examinations. Therefore, the laws for licensing physicians, and the examinations on which licensure is based, would have to be changed. The present habits and customs of medical practice would also have to be changed.

And, in addition to these difficult accomplishments, the public would in mere fairness have to be warned that they should avoid calling a doctor until they had pretty well made the diagnosis for themselves and had inquired what type of specialist the M. D. in question was. Otherwise, they might suffer the embarrassing mistake of calling in a dental specialist to treat a case of constipation. And it would be embarrassing! For even though he called himself a stomatologist, he would probably be insufficiently acquainted with the lower opening of the bowel since he had specialized only in its upper opening.

### Every Medical Graduate a Specialist

This proposed scheme would, however, accomplish two things. It would make specialists out of practically every medical graduate and it would make dentists the equal of them all; equal legally, equal socially and equal in the ignorance of what a really well-rounded, general medical training means. This scheme appeals to me as being destructive rather than constructive. It might help the dentists but it would certainly harm the doctors.

One of the pleas on which it is based is in the nature of a threat. Namely, that the public wants cheaper medical service and is bound to get it, and (the argument runs) one of the surest ways of lowering the cost of medical service is by shortening the length of the training demanded.

This argument is fallacious. In medical service and other forms of insurance the best is the cheapest in the long run. But the cheapest is not by any means always the best. Moreover, the public does not really want the cheapest. It really wants the best but, like most of us, it hates

to pay for it. Moreover, it may be doubted that the public now wants highly defined specialists as much as it thought it did a few years ago. One reads, here and there, a plaintive request for the return of the family doctor, the general medical man. And one finds now, on statistical research, in limited degrees at any rate, evidence which seems to point away from the goal of early specialization for recent medical graduates. However, the proposed scheme would make cheaper doctors and more specialists if not better ones. But if the public does want that kind (I may be wrong, of course) they might import them from Russia, where, after a high school education and two years of preclinical training, they are educating specialists in two years and standardizing them along four lines, gynecologic, dental, sanitary and medical. Along these lines they are outdoing even their famous Five Year Plan by turning out medical specialists almost as fast as they turn out tractors. However, if the Five Year Plan is going to have five years added to it, perhaps their medical education plan may eventually also be found in need of additions.

I am a little ashamed even to have mentioned this Russian plan but it was mentioned by the Journal of the American Medical Association with less than its usual careful conservatism, and it was further brought to my attention by one of our foremost dental educators as evidence that in Russia, at least (that most fascinating country where people are at once masters of and slaves to propaganda), dentistry had been put in its proper place as a specialty of medicine. "Yes," (someone remarks) but my God, what medicine!" Think of taking a high school lad and making him a medical specialist in four years! Why you could not do it even with modern machinery. You could squeeze him into the form but he would still be one-third empty.

### The Subdentists

There is another thing that I am merely going to mention, the subdentists. If the future dentist, the specialist in medicine, may be referred to as superdentist we may call his assistants subdentists. The subdentist is a high school lad who, in from six months to two years (according to your enthusiasm at the moment), has been made into a fine dental mechanic or technician.

Someone told Winternitz that a proper dentist could easily supervise twenty subdentists. Winternitz told it to a group of dentists and some of them are now telling it to us medical men. Well, this may be a fact, but I should like to know more about what the original informant meant by supervision, and I would especially like to know whether the particu-

lar subdentist to whom I was assigned had had six months or two years training before I laid my molars on the altar of his continued education. I confess that I am old-fashioned, that I feel particularly helpless when my mouth is full of fingers and cotton and instruments, and I am very ticklish about my teeth. Probably that is why I am so opposed to the idea of the subdentist.

But I can seriously conceive of one possible very real evil connected with them. Being twenty to one they would soon outvote the superdentists and legislate themselves into his class. And where would dentistry be then as a specialty of medicine? No, I cannot agree, nor even sympathize, with the scheme proposed by our foremost dental educators. Personally, I do not think that dentistry is a specialty of medicine. Personally, I am not convinced that it ought to be. But, if I am wrong on the latter count, and dentistry ought to be a specialty of medicine, the only way it can become so in reality is by putting a foundation of general medical education beneath its own special education, just as the accepted specialties in medicine have done.

### Teach More Odontology and Stomatology

But, I think there is a better scheme than this, better for the public, better for medicine and better for dentistry. Let us leave dentistry, for the present at least, to work out its own salvation; but with all the help and sympathetic encouragement we can give it. The splendid progress it has already made deserves, I believe, our confidence. Let us in the medical schools teach our students a little more about odontology and stomatology.

A certain prominent surgeon has estimated that more than 60 per cent of the patients in a large and famous clinic are brought there by something that has happened in their mouths or something that has passed through them. If this estimate is correct, the mouth and all its contents, as well as its immediate surroundings, deserve more attention than we have given them. And are not the dentists right in saying that doctors know too little about the mouth and teeth? And would it not be much simpler to add special information about the mouth and teeth to a medical course than to add all the rest of medicine to a dental course?

If this rather frivolous discussion of a serious subject has had no further value, it serves, at least, to point a moral and adorn a tale. The tale is one of omission. Only 17 per cent of the medical schools in the United States give any formal instruction in diseases and disorders or deformities connected with the teeth. And the moral is: let us mend

our fences or we may find something we do not yet want inside them. Medicine and medical education have troubles of their own which will not be alleviated by attempting to swallow whole another profession: a profession, which, by and large, does not want to be engulfed. And a profession like dentistry, with a hundred year history, deserves to have its feelings considered. You may call dentistry a specialty of medicine, but that does not make it so: and it is none the less valuable for that fact.

I can see no reason why the degree, Doctor of Dental Surgery, honestly held and honorably upheld, should not in the future deserve equal respect and esteem from the public with the degree of Doctor of Medicine, provided it is held by a similar type of man. And whatever their future relationship may be, let medicine and dentistry now go forward side by side as friendly collaborators in the estimable undertaking of offering help to those who need it and adding to the happiness of life as much as to the length of its span.

*(Discussion on this paper by Dr. Alfred Owre will be published in the next number of the JOURNAL.)*

## Higher Entrance Requirements

Columbia University College of Physicians and Surgeons announces that beginning September, 1932, the minimum requirement for admission to the first year class is attendance for three full years at an acceptable college of arts and sciences, which must at least include successful completition of courses required for the New York state medical students certificate.

Preference will be given in the selection of students to those who, in the opinion of the Committee on Admissions, present evidence of high achievement in their college education and who are most likely to succeed in medicine, rather than to those who present the largest number of course credits or who have limited their preparation to the premedical sciences. Inasmuch as an understanding of the medical sciences and of clinical medicine is based upon knowledge of the underlying sciences of chemistry, physics and biology, students are urged, as far as time permits, to take additional courses in quantitative, qualitative, physical and organic chemistry, comparative anatomy and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history and other subjects of general cultural and scientific value.

JOURNAL
OF THE
Association of American Medical Colleges

Volume 7 MARCH, 1932 Number 2

DR. FRED C. ZAPFFE, Editor, 25 East Washington Street, Chicago

## Report of the Subcommittee on Medical Education of the General Fracture Committee of the American College of Surgeons

At a meeting held recently in Chicago, the following report was made:

Most of the medical schools of the country have reduced the number of hours in their undergraduate curriculum. As a result, in many special fields of medical work the undergraduate instruction has become of necessity limited very largely to a thorough understanding of general principles followed by an opportunity to apply these to individual cases under the direction of a teacher. As a result of this, it has become of increasing importance that those responsible for the undergraduate teaching of fractures should concentrate their efforts on formulation and explanation of broad general principles.

To make up for the lack of undergraduate teaching it is of greater importance that in each hospital at least one man be made responsible for the careful training of an intern staff in this field. Moreover, the need for the establishment of opportunities for the practicing physician to refresh or increase his knowledge in the treatment of fractures has become much greater.

It is therefore recommended that

1. Even greater stress be placed on instruction in the pathology of fractures, the process of repair, and the broad general fundamental principles of treatment.
2. Each hospital, whether it contains a special fracture service or not, appoint someone who shall be responsible for the training of interns in the treatment of fractures.
3. Wherever possible, opportunities for continued education for graduates in medicine be established both in teaching hospitals and under the auspices of the various medical societies.

---

## Congress on Medical Education, Licensure and Hospitals

The twenty-eighth Congress on Medical Education, Licensure and Hospitals was held in Chicago under the auspices of the American Medical Association, February 15 and 16.

The attendance was very satisfactory and the program held the interest of those attending the various sections from beginning to end. Despite the fact, however, that the arrangement of papers as to time of reading was well done, the inevitable conflict was not obviated. There are always those whose interest is distributed throughout the whole program rather than being centered in one group, and these persons find it impossible to hear every paper read in which they have an interest. Of course, the papers, and the discussions thereon, will be published in their entirety and one can read at leisure what may have been missed at the Congress. Much credit is due those who arranged the program and those who contributed so largely to its success.

---

## Committee on Intern Training

At a meeting of the Executive Council held February 16 in Chicago, the fol-

lowing committee was appointed—in addition to the chairman who was appointed at the previous meeting of the Council held in New Orleans at the close of the annual meeting: Irving S. Cutter, chairman; Langley Porter, C. S. Bardeen, Worth Hale and Ralph J. Cox.

## Date of 1932 Meeting

Owing to the fact that the presidential election will be held on November 8, one of the three days previously selected for the 1932 meeting of the Association, the Executive Council has selected a new date for the meeting: November 14, 15 and 16, the Monday, Tuesday and Wednesday of the week following the previous selection.

The Benjamin Franklin Hotel, Philadelphia, has been selected as headquarters. A local committee consisting of Drs. Ross V. Patterson and William Pepper, is working on the arrangements for the meeting. Details will be published later.

## General Medical Council of Great Britain

Sir Norman Walker, for many years a member of this body, was recently elected to the presidency. Sir Norman has been keenly interested in the problem of American students applying for admission to the medical schools of Great Britain and likewise in the work of the Association of American Medical Colleges. Wholly due to his influence, all applications coming from this source have been submitted to the Association for evaluation and interpretation since late in 1930. Many hundreds of such applications have been reviewed and the result has been a most happy one for all concerned.

## Study of University Teaching

The American Association of University Professors has received a grant of $20,000 from the Carnegie Corporation and the Carnegie Foundation for the Advancement of Teaching to make a survey of the teaching now being done by college and university teachers in the hope that some constructive recommendations for the improvement of teaching methods may be the outcome.

## Canadian Medical Association

This Association, through its department of hospital service, has prepared a list of hospitals in Canada which are approved for internship. These hospitals provide interns with clinical and other facilities, and opportunities for study and experience.

A copy of the Basis for Approval may be obtained by writing to Dr. Harvey Agnew, secretary, 184 College Street, Toronto.

Twenty-six Canadian hospitals are approved and twelve others are "recommended."

## Extension Courses in New Jersey

For the third successive year the Medical Society of New Jersey and the extension division of Rutgers University, New Brunswick, are cooperating in the presentation of a series of graduate courses for physicians. The courses are being given in fifteen of the twenty-one counties of the state. They consist of eight weekly lectures, the starting dates covering the period from December 3 to April 7. Lecturers include many physicians from the staffs of New York medical schools. The first course began December 3 with a schedule of four lectures each on fractures and newer drug therapy. Other subjects will include neurology, gynecology, pediatrics, traumatic surgery, obstetrics, gastroenterology and surgery.

## Canadian Hospital Council

A federation of all provincial, interprovincial and other hospital associations in Canada, to be known as the Canadian Hospital Council, was organized recently. Dr. Fred W. Routley, Toronto, was elected president, and Dr. George H. Agnew, Toronto, secretary.

# College News

## St. Louis University School of Medicine

The pediatric division, with beds for 40 children and eight infants, was opened recently in the newly constructed St. Mary's Hospital, the clinical division of the school. The division is located on the first floor of the west wing of the hospital. It is decorated in the manner of a nursery. Every room is furnished in miniature; gaily painted and decorated; the furniture includes little tables, chairs and beds. The walls are decorated with nursery rhymes. Two to six beds occupy each room, with some private rooms with bath to accommodate both the small patient and its mother when she desires to remain in the hospital. The ward for infants has eight cribs, plate glass windows line the central corridor making the interior of the rooms visible without entering them. Patients with contagious diseases are treated in the isolation division which is entirely separated from the main corridor. It has its own outside entrance and is divided into two parts which can be used either as wards or as private rooms.

The operating room is fully equipped for performing all minor operations and emergency work. The necessary examining room and lockers for physicians and nurses are provided.

The service includes accommodation for free, part pay and full pay patients.

## University of Maryland School of Medicine

Plans for the new $1,500,000 building for the University Hospital are completed. Funds voted at the last session of the general assembly will be made available in two installments in February and August. Plans call for a 400 bed hospital in the shape of a cross, with provision for 250 training beds. The remaining accommodations will be for persons of moderate means, including a few private rooms. The building, which will be erected either on the site of the present hospital or in the vicinity of the other university buildings about Lombard and Greene streets, will be twelve or thirteen stories high.

## University of Michigan

The board of regents has appointed Dr. James D. Bruce vice president in charge of university relations. This is a newly created position, in which Dr. Bruce's duties will be to centralize all requests made to the university for outside aid and help in meeting them so far as the university's resources allow. Dr. Bruce for the last three years has been director of the department of postgraduate medicine.

## Harvard Medical School

Free public lectures on medical subjects have been given by various members of the faculty on Sunday afternoons during January and February and will be continued during March.

## University of Manitoba Faculty of Medicine

Dean Mather reported that 62 per cent of the graduates of this school leave Manitoba Province to practice in other Provinces of Canada; 27 per cent go to the United States of America and other continents to practice. He advocates the requirement of a fifth, or intern year, and states that all the students (50 to 60) could be placed in approved hospitals

in Winnipeg. He also recommended that the registrations to the first year class be limited to 50 or 60, and that Canadians only be accepted.

Of the 82 freshmen registered in 1930, 36, or 43.9 per cent, failed; an increase of 22.1 per cent over the 1929 class.

## University of Toronto Faculty of Medicine

Dr. J. G. FitzGerald has been appointed dean of the Faculty of Medicine. Professor of preventive medicine, director of the School of Hygiene and director of Connaught Laboratories, he succeeds Dr. Alexander Primrose, who retired December 31, 1931.

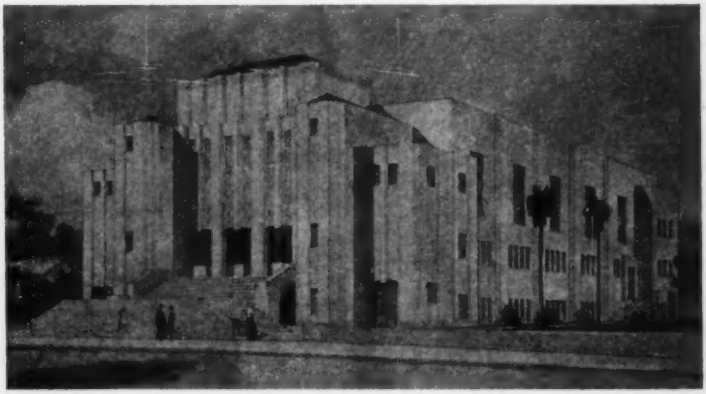
With Dr. FitzGerald will be associated Dr. E. Stanley Ryerson as assistant dean of the faculty. Dr. Ryerson is at present secretary of the faculty and assistant professor of surgery. The appointments take effect immediately. The new Dean of Medicine has a world-wide reputation in Public Health and is a member of the International Health Board of Rockefeller Foundation. To his initiative and zeal the university owes the School of Hygiene the money for which was donated by the Rockefeller Foundation and which is now in process of enlargement. Under his direction insulin and toxins and other public health products are manufactured in the Connaught Laboratories.

## College of Medical Evangelists

Arthur E. Coyne has succeeded L. C. Kellogg as dean of the Los Angeles division. Dr. Kellogg becomes director of graduate study.

Alonzo E. Taylor, director of the Food Research Institute of Stanford University, delivered the fourth annual series of three lectures under the Colver Lectureship.

An assembly hall and library building known as the David Paulson Hall has been erected in connection with the White Memorial Hospital and the Clinical Division of the College in Los Angeles. The building is sixty feet wide and one hundred twenty-five feet long. The architecture is Spanish in type and the construction California steel frame and stucco. The auditorium and gallery seat one thousand sixty-one. The building will be used for larger medical gather-



COLLEGE OF MEDICAL EVANGELISTS, ASSEMBLY HALL AND LIBRARY BUILDING

ings connected with the work of the school and other medical organizations. A full light basement houses the library and a large examination room in which the examinations of the National Board of Medical examiners will be conducted.

## Columbia University

Gifts to Columbia.—Gifts amounting to more than $20,000 have recently been presented to Columbia University for research and other medical purposes, as follows: $10,000 for research in biologic chemistry and $950 for research in bacteriology from the Chemical Foundation; $5,000 for the special tuberculosis fund, presented anonymously; $1,250 to the department of bacteriology, from Mr. and Mrs. Willis D. Wood; $1,250 for research in acute anterior poliomyelitis under Dr. Frederick P. Gay, from the International Committee for the Study of Infantile Paralysis; $1,000 for research in otology, from Dr. Cornelius G. Coakley; $820 for medical research, from the National Tuberculosis Association; $500 to the Nutritional Research Fund in the department of pathology, from Dr. Alfred F. Hess, and $500 to the department of neurology, from Dr. Moses Allen Starr.

## Tulane University of Louisiana School of Medicine

Announcement is made of a special three months intensive course in tropical medicine to be given in the Department of Tropical Medicine.

The course is intended for public health officers who are graduates of medicine, physicians who intend to practice in the tropics, medical missionaries, physicians especially interested in the diseases of warm climates or in human parasitology and for senior medical students who are well qualified and are properly recommended by their schools. This will afford an opportunity for a school to allow one or more selected senior students to take a special intensive course in tropical medicine as an elective in place of the elective or other work in the last trimester at that school.

The different parts of the course fall under three general heads: I: Tropical Medicine (General); II: Human Parasitology; III: Hygiene and Public Health.

## University of Texas Medical Branch

Meyer Bodansky, director of the John Sealy Memorial Laboratory, and professor of pathological chemistry, has a leave of absence from his duties in these institutions to act as visiting professor in biological chemistry, for the first semester in the American University of Beirut. Dr. Bodansky will be gone six months. He plans to attend the 14th International Physiological Congress which meets in Rome, Aug. 29-Sept. 3, 1932. He will return to Galveston by the second semester in 1933.

The new laboratory extension will probably not be occupied until the latter part of the second semester. The building, when occupied, will cost about $400,000.

The College of Nursing has as its director, Miss Dorothy Rogers, B. A., M. A., Graduate in Nursing, and her assistant, Miss Louise Mueller, B. A., M. A., Graduate in Nursing. The five year plan leading to the degrees of B. S. in Nursing and Graduate in Nursing has been completed, through arrangements with the College of Arts and Sciences at the Main University, Austin, Texas.

A committee for the revision of the curriculum has been appointed and plans are under way for this revision.

The Psychopathic Hospital, located in proximity to the School of Medicine, opened its doors in the late fall for the reception of patients, and the teaching of medical students in nervous and men-

tal diseases. Dr. Titus H. Harris, professor of neurology and psychiatry, has been made clinical director of this institution.

## Duke University School of Medicine

The Beta Epsilon Chapter of the Phi Beta Pi Fraternity was installed recently, with 24 students of the medical school as members, and the Beta Nu Chapter of the Alpha Kappa Kappa Fraternity, with 18 students of the medical school as members. Guest lectures have been: Dr. E. J. Van Liere, professor of physiology at the University of West Virginia, and Dr. Lawson G. Lowry, of the Commonwealth Fund, New York City; Dr. Wm. H. Gantt, psychiatrist at The Johns Hopkins Hospital, Dr. Charles H. Mayo and Dr. John Rathbone Oliver, associate professor in the history of medicine in Johns Hopkins University.

January 23, Dr. Elliott P. Joslin, clinical professor of medicine in Harvard Medical School, lectured on "The Modern Treatment of Diabetes."

January 8, Dr. George E. Bennett, professor of clinical orthopedics at Johns Hopkins University School of Medicine, lectured at the Duke Hospital on "Recurrent Dislocations of the Shoulder Joint."

## Vanderbilt University School of Medicine

Dr. G. Canby Robinson, director of the New York Hospital, Cornell Medical College Association of New York City, delivered the History of Medicine lecture at Vanderbilt University on December 3. His subject was "The Liberators in Medicine—Vesalius, Paré and Paracelsus."

Two appropriations totaling $300,000 to Vanderbilt University for the benefit of the School of Medicine have recently been announced.

Of this amount, $250,000 was granted by the Rockefeller Foundation as a fluid Research Fund for the School of Medicine, with the understanding that a supplementary amount shall be secured by the authorities of the School of Medicine. An appropriation of fifty thousand dollars was made by the General Education Board for the Medical Library. The Research Fund will be divided and distributed over a period of eight years, while the Medical Library grant will be distributed over a period of four years.

Dr. Thomas S. Cullen, Professor of Gynecology at Johns Hopkins Medical School, will deliver the Phi Beta Pi lecture at the Vanderbilt University School of Medicine on February 16. His subject will be "Gynecology of Yesterday and of Today."

## Meharry Medical College

Ceremonies dedicating the new plant were held in November. Addresses were delivered by Waller S. Leathers, dean of Vanderbilt University School of Medicine; Elias P. Lyon, dean, University of Minnesota Medical School; Basil C. H. Harvey, dean of medical students, University of Chicago. Bishop Thomas Nicholson of the Methodist Episcopal Church made the formal dedicatory address. Funds for the project were supplied principally by the General Education Board; the Julius Rosenwald Fund; Mr. George Eastman, Rochester, N. Y.; Mr. Edward Harkness, New York; the Methodist Episcopal Church; the city of Nashville; alumni of the college, and other friends of the institution.

## George Washington University School of Medicine

Construction will soon begin on a four-story addition to cost about $75,000. It will contain a central laboratory for the hospital, teaching laboratories for clinical microscopy, bacteriology and hygiene and preventive medicine, research laborato-

ries for bacteriology, and animal quarters for experimental work for the entire school in addition to other research laboratories. This building will serve as temporary quarters until the medical school can move into a new plant, as a part of the proposed George Washington University Medical Center.

Dr. Radford Brown of Sloane Hospital for Women, New York, has been appointed professor of obstetrics and gynecology and executive officer of the department.

## New York Postgraduate Medical School

The fiftieth anniversary of the founding of this school was celebrated in New York, February 1, 1932. Dr. John F. Erdman, chairman of the Faculty Association, introduced the toastmaster of the evening, Dr. Arthur F. Chace, president of the school and its affiliated hospital.

Other speakers were: Dr. George H. Meeker, dean of the Graduate School of Medicine of the University of Pennsylvania; Dr. Nicholas Murray Butler, president of Columbia University, and Dr. Ray Lyman Wilbur, Secretary of the Interior.

## University of Colorado School of Medicine

George A. Moleen, professor of neurology and head of the department of neurology, has been granted a year's leave of absence on account of ill health.

Edward Delehanty, assistant professor of neurology, has been appointed acting head of the department of neurology during Dr. Moleen's absence.

Robert M. Hill, associate professor of biochemistry, is on a year's leave of absence for study in the F. G. Hopkins laboratory at Cambridge, England.

Frederick E. Becker, assistant professor of pathology, died at St. Anthony's Hospital, Denver, January 8. The cause of his death was agranulocytic angina. Dr. Becker received his M. D. degree from this institution in 1925. He was the author of several medical articles, particularly concerning his experiments in the isolation of the tick fever germ as it exists in the Rocky Mountain region.

David M. Skilling, Jr., (Washington University School of Medicine 1928), has been appointed instructor in the department of pathology.

## University of Chicago and Rush Medical College

A new program affecting the administrative relationship between the University of Chicago and Rush Medical College was announced recently by President Robert M. Hutchins of the university at the regular quarterly meeting of the medical school faculty.

Under President Hutchins' plan the dean of Rush Medical College will be responsible to the dean of the division of biological science at the university. Dr. Ernest E. Irons is dean of Rush, and Dr. Frederick E. Lillie, dean of the biological division.

President Hutchins stated that the university wishes to have Rush College function as an integral part of the university.

## University of California Medical School

Dr. Willis C. Campbell, professor of orthopedic surgery, University of Tennessee, Memphis, addressed the faculty and students of the University of California Medical School January 23, on "The Treatment of Ununited Fractures."

Dr. Henry E. Sigerist, Director of the Institute of the History of Medicine of the University of Leipzig, Germany, gave three lectures in January under the auspices of the medical school: "The Evo-

lution of Medical Ethics;" "Medicine of the Renaissance," and "Civilization and Disease."

Dr. J. C. Meakins, professor of medicine and director of the department of medicine, McGill University, will be at the medical school as university lecturer from March 11 to April 2, 1932.

The University Lectureship was established in 1930. The first University Lecturer was Dr. Llewellys Barker of Baltimore, Maryland, and the second was Dr. Herman Adler. Each year a distinguished physician is invited to fill the post, which requires that the incumbent conducts clinics and demonstrations at the medical school during his month's incumbency. Members of the medical profession are welcome to attend these conferences.

## University of Virginia Medical School

At the meeting of the University of Virginia Medical Society on December 7, Dr. Edwin McQuade gave a review of "Recent Studies on the Common Cold," Dr. William A. Brumfield discussed the "Epidemiology of Syphilis," and Dr. D. C. Smith presented a paper on "Jugular Compression, A Possible Adjunct in the Treatment of Neurosyphilis."

The thousand dollar prize given each year by the American Association for the Advancement of Science "for a notable contribution to science" was awarded at New Orleans on January 1st to Dr. Carl Caskey Speidel, professor of anatomy, for his studies of living nerve fibers.

Dr. C. C. Speidel presented his work on the "Activities of Ameboid Growth Cones, Sheath Cells and Myelin Segments, as Revealed by Prolonged Observation of Individual Nerve Fibers in Living Frog Tadpoles" before the George Washington University Medical Society on January 16.

At the meeting of the University of Virginia Medical Society on January 18 the following program was presented: "Observations on Maternal and Fetal Interrelationships," by Dr. Corey; "Recent Advances in Adrenal Physiology," by Dr. Britton; and the "Clinical Use of Cortico-adrenal Extract," by Dr. Jas. C. Flippin.

## Western Reserve University School of Medicine

Dr. Lee H. Ferguson, director of health service of Western Reserve University, reported on a plan for a five year study of tuberculosis in students, at the meeting of the American Student Health Association, at Hotel Astor, New York, December 29.

Dr. James Angus Doull, professor of hygiene and public health in the School of Medicine of Western Reserve University, addressed the American Epidemiological Society meeting at Yale University on December 11, on "Tuberculous Infection in Medical Students." The following week he went to Baltimore as adviser to the John Abel Fund for Research on the Common Cold, at Johns Hopkins University.

# Personals

Jay Arthur Myers has been promoted from associate professor to professor of preventive medicine at the University of Minnesota School of Medicine.

---

A. Richard Bliss, Jr., chief of the Division of Pharmacology, College of Medicine, University of Tennessee, has been elected president of the Tennessee Academy of Science.

---

Albert Kunz, professor of micro-anatomy in St. Louis University School of Medicine, conducted a lecture tour of the west. His subject was "Clinical Problems Related to the Anatomic Nervous System."

---

Don M. Griswold, formerly associate professor of hygiene, State University of Iowa College of Medicine, Iowa City, and commissioner of health in Iowa, has been provisionally appointed consulting epidemiologist in the division of communicable diseases of the state department of health.

---

Ewen M. MacEwen, professor of anatomy in the University of Iowa College of Medicine, will succeed the late Henry J. Prentiss as head of the department.

---

A bronze plaque in bas-relief of the late Preston M. Hickey, for many years professor of roentgenology, University of Michigan School of Medicine, Ann Arbor, was presented to the university recently. The plaque, the work of Heinz Peter, was given by the American Roentgen-Ray Society, it is reported, and the presentation was made by Dr. Leopold Jaches, New York, president of the society.

Davenport Hooker, professor of anatomy in the School of Medicine of the University of Pittsburgh, was appointed a member of the editorial board of the Journal of Comparative Neurology.

---

H. Sheridan Baketel, professor of preventive medicine and hygiene in Long Island College of Medicine, has resigned.

---

Elliott C. Cutler, professor of surgery in Western Reserve University, has been appointed Moseley professor of surgery in Harvard Medical School to succeed Harvey Cushing who has retired from this chair.

---

William W. Looney, professor of anatomy in Baylor University College of Medicine, is the author of a book entitled "The Anatomy of the Brain and Spinal Cord."

---

Allen O. Whipple, professor of surgery in Columbia University College of Physicians and Surgeons, is the first incumbent of the newly established Valentine Mott professorship of surgery.

---

H. J. Deuel, Jr., professor of biochemistry in the University of Southern California, has been granted $300 by the Elizabeth Thompson Science Fund for investigation on the antiketogenic value of various carbohydrates.

---

Wm. H. Park, director of laboratories in University and Bellevue Hospital Medical College (New York University), was elected vice president of Section N —Medical Sciences of the American Association for the Advancement of Science.

Louis B. Wilson, director of the Mayo Foundation, was elected president of Sigma Xi recently.

---

P. B. Balekia, McGill University, has received a grant of $300 from the Elizabeth Thompson Science Fund for assistance in experimental investigations on the relation of gastric secretion to pernicious anemia.

---

Frederick M. Hanes will serve as acting professor of medicine and head of the department in Duke University during the absence of Dr. H. L. Amoss in China.

---

Sir Robert H. Falconer, for many years president of the University of Toronto, has retired. He will be succeeded in the office by Canon Coty.

---

Sidney C. Dalrymple has been promoted to associate professor of pathology, not instructor, as previously reported.

Earl D. Bond, professor of psychiatry, University of Pennsylvania, School of Medicine, has been appointed a member of the state welfare commission.

---

Claude S. Beck, assistant professor of surgery in the School of Medicine of Western Reserve University, addressed the Johns Hopkins Medical Society on February 8, on "The Surgical Treatment of Pick's Disease and Pneumocardiac Temponade in Relation to Surgery of the Heart."

---

C. Jeff Miller, professor of gynecology, Tulane University of Louisiana School of Medicine, New Orleans, gave the tenth annual Hodgen Lecture, January 12, in St. Louis.

---

On September 1, 1932, Harvey Cushing will retire as Moseley professor of surgery on the faculty of Harvard University Medical School and as surgeon-in-chief of Peter Bent Grigham Hospital.

## Deaths

George S. Derby, professor of ophthalmology in Harvard University Medical School, died in December, aged 56.

---

W. H. Hattie, associate dean and professor of preventive medicine and public health on the Faculty of Medicine of Dalhousie University, died recently of arthritis.

---

Henry L. Taylor, associate professor of medicine in the University of Minnesota, died of intestinal influenza, aged 72.

---

Peter M. Keller, associate professor of medicine in the College of Medical Evangelists, died, aged 58.

Edward M. Pemberton, formerly professor of physiology and pharmacology in University of Arkansas School of Medicine, died suddenly, aged 50.

---

G. Wilfred Derome, professor of legal medicine in University of Montreal Faculty of Medicine, died, aged 54.

---

William E. Jones, professor of medical ethics in the School of Medicine of the University of Arkansas, died of carcinoma of the stomach, aged 62.

---

Nelson Capen, professor of therapeutics in Georgetown University School of Medicine, died, aged 57.

# General News

## Alvarenga Prize

The Alvarenga Prize for 1931 has been awarded to Dr. Edgar S. King of Melbourne, Australia, for his work on the nature of the stroma of the ovary. The prize amounts to about $300.

## Commonwealth Fund Grants for Medical Research

During the year the Fund assisted in meeting the cost of a study of normal kidney function, at the University of Pennsylvania; serum treatment for pneumonia, at New York University and in the state of Massachusetts; rheumatic heart disease, at the House of the Good Samaritan, Boston, and at New York University; dental decay at the Columbia University School of Dental and Oral Surgery; cardiac disease in children, at Cornell University Medical School; undulant fever, at Michigan State College; multiple sclerosis and epilepsy, at the Neurological Institute, New York; the effects of radiation upon organisms, under the auspices of the National Research Council; trachoma, at Washington University; growth processes in children, at the University of Colorado; and the boundaries between normal and abnormal mental and neurological functions, at the University of Pennsylvania and the Neurological Institute, New York.

The Fund also aided, to the extent of $75,000, in the construction of a new building for the Hospital Internacional in Santo Domingo and provided a building for the Rutherford County Health Department, Murfreesboro, Tennessee. Among the miscellaneous appropriations was one of $22,000 to aid in the reorganization of the educational work of the Children's Village, Dobbs Ferry, N. Y.

## Medical Students in Ontario, Canada, Schools

There are 846 medical students registered at the University of Toronto, 303 at Queen's, and 227 at Western Ontario, making a total of 1376 registered in Ontario for the current college year.

## Boston Dispensary Department of Clinical Research

The organization of the research activities of the dispensary is announced. Dr. William A. Hinton is the director. This is the culmination of four years of clinical research among the large outpatient clientele of the dispenary.

## Elizabeth Thompson Science Fund

Applications for grants should be sent to the secretary of the Fund, Dr. Edwin B. Wilson, 55 Van Dyke St., Boston.

## London School of Hygiene

This school has been admitted as a school to the University of London in the faculties of medicine and science. A university chair has been established for Medical Industrial Psychology.

## Sun Yat Sen University

A new pathological institute was recently opened in this school in China and placed under the direction of Dr. Ernst Dormanns.

## George G. Sears Surgical Research Laboratory

The late Charles H. Tyler bequeathed $1,000,000 to establish and maintain a laboratory for surgical research at the Boston City Hospital. The laboratory is

named after Dr. George E. Sears, emeritus professor of clinical medicine in Harvard Medical School and a trustee of the hospital.

## American Dental Association

At its annual meeting held recently in Memphis, the Association decided to hire an advertising agency to advertise dental health in national magazines and on the radio. It is estimated that the cost of this advertising will amount to $500,000.

## Nobel Prize in Medicine

Otto H. Warburg of the Kaiser Wilhelm Institute of Berlin, has been awarded the Nobel Prize in physiology and medicine for 1931 for his studies on cellular respiration. He found that respiration is possible only in the presence of iron carried by a definite enzyme.

## White Collar Hospital

A new unit of the Mount Sinai Hospital, in New York, was opened recently for the care of "white collar" patients. Hospital care and medical and surgical treatment will be offered at about one-half the usual cost. Rates will run from $35 to $45 a week. Sacrifices on the part of donors, nurses and physicians will make the experiment possible.

## Laennec's Writings Presented to Johns Hopkins

The Henry Barton Jacobs Collection of medical books, prints, medals and autograph letters was formally presented to the Institute of the History of Medicine, Johns Hopkins University, January 14, by Dr. Henry Barton Jacobs. What is believed to be the world's only complete collection of the writings of René-Théophile-Hyacinthe Laënnec (1781-1826) is included in the gift. Included in the Jacobs group also are complete collections in all editions and all Western languages of the writings of Edward Jenner (1749-1823), Louis Pasteur (1822-1895) and Sir William Osler (1849-1919).

The collection consists of 5,000 volumes, about 2,500 medical prints, 500 medical medals and about 300 autograph medical letters and manuscripts. Stained glass windows commemorating Laënnec, Jenner, Pasteur and Osler have been placed in the room which Dr. Jacobs has equipped on the institute floor of the library for housing the collection as a unit. Dates, medical symbols and works associated with the men they commemorate are worked into the design of the windows.

## Fellowship in Neurology

Dr. and Mrs. William H. Wilder, Sr., have established the William H. Wilder, Jr., fellowship in neurology at the University of Chicago, in memory of their son, a student in neurology at the university, who was drowned last summer. The fellowship is to be awarded to a student of neurology nominated by the department of anatomy on recommendation of the professors in charge of neuroanatomy and clinical neurology. Mr. Paul G. Roofe has been appointed the first recipient of this fellowship.

## Grading Schools of Nursing

The Committee on Grading of Nursing Schools will function for two more years. The committee has begun a second grading. Schools will be compared on a fairly large series of items in the hope of obtaining information sufficiently valid to permit it to be made available to prospective students and others interested. Publicity will not be given to the results for individual schools, but the committee expects to make "educational comparisons," which may be made available to persons who ask for specific information.

The committee is at present attempting

to formulate minimum standards for schools of nursing. It is also preparing a handbook on the methods of grading evolved through its experience. Toward the end of 1933 the committee plans to publish a final report, which will set forth the problems of nursing education as the committee has found them and whatever recommendations it feels qualified to make leading toward the solution of the problems. Dr. William Darrach, New York, is chairman of the committee and May Ayres Burgess, Ph. D., is director.

## University of Tennessee College of Medicine

Drs. Edward G. Thompson, William C. Colbert, Conley H. Sanford and Arthur F. Cooper have recently been advanced to associate professorships of medicine at the University of Tennessee College of Medicine, Memphis.

## White House Conference Follow-Up Committee

Two conferences of the Follow-Up Committee of Section I of the White House Conference on Child Health have been held. The objects of the White House Conference were (1) to study the present status of the health and well being of the children of the United States; (2) to report what is being done for child health and protection, and (3) to recommend what ought to be done and how to do it. It was to carry out this third objective that the organization of the Follow-Up Committee was authorized at the last session of the White House Conference.

The survey made by Section I revealed that the gaps in child health service were of two kinds: failure to apply much that is known, and the necessity for futher investigation in the clinic and laboratory that the needs in the promotion of child health may be more adequately met. The committee's first function is to try to stimulate a more adequate application of the known by advising constructively on and initiating principles of health betterment in the working programs of existing organizations active in the promotion of child health. The committee's purpose will be to invite the formulation and acceptance by all the agencies involved in promotion and protection of the health of the child of a central program embodying the basic principles on which are founded the physical and mental stamina of the people. It is hoped to continue this committee for ten years, which would bring it up to the probable next national child health conference.

Members of the committee include Ray Lyman Wilbur, Washington, D. C., honorary chairman; Samuel McC. Hamill, Philadelphia, chairman; Fred L. Adair, Chicago; Kenneth D. Blackfan, Boston; Ida M. Cannon, Boston; Anton J. Carlson, Chicago; Samuel J. Crumbine, New York; Clifford G. Grulee, Chicago; Henry F. Helmholz, Rochester, Minn.; F. J. Kelly, Chicago; Guy S. Millberry, San Francisco; Fred Moore, Des Moines, Iowa; Sophie C. Nelson, Boston; Everett D. Plass, Iowa City; Richard E. Scammon, Rochester, Minn.; Wingate Todd, Cleveland; Philip Van Ingen, New York; Henry F. Vaughan, Detroit, and Borden S. Veeder, St. Louis.

## Lane Lectures at Stanford

A course of popular medical lectures will be given during the winter quarter of 1932 in celebration of the fiftieth anniversary of these lectures, which were established by Dr. Levi Cooper Lane in 1881. Dr. Lane was the founder of the Cooper Medical College, now Stanford University School of Medicine, the Lane Medical Library and the Lane Medical Lectures. Three lectures were given in January and February. The following

lectures will be given on alternate Friday evenings at 8 P. M. in Lane Hall: March 4: "Social Aspects of Child Welfare," Dr. Henry Dwight Chapin, New York; March 18: "Fifty Years of Progress in the Prevention of Disease," Dr. Jacob Casson Geiger, San Francisco.

## Edward Mollinckrodt Institute of Radiology

This institute has been placed in operation at the Washington University School of Medicine, St. Louis. The eight story building represents with apparatus, equipment and endowment an investment of $1,220,000. The plan of housing a large roentgen ray department in one building is said to be entirely new. Six of the eight floors open on the main corridor of Barnes Hospital. The building is connected with the Children's Hospital by tunnels.

## The Institute for Liberal Education

Announcement has been made of the formation of this Institute in Kansas City, Missouri (1221 Baltimore Avenue). The object of the Institute is to bring the benefits of a liberal education to business and professional men who have not had time for such study or who wish to make a review. Mr. John A. Lapp is the educational counsel.

The program of The Institute for Liberal Education is to furnish a "liberal arts" training covering a period of two years by both resident and extension methods. The Institute for Liberal Education has included in its course of study those liberal arts subjects which are basic in college curricula and are found to have a broadening and liberalizing effect on the mind.

The Institute for Liberal Education text material lends itself with equal attractiveness to residence or extension methods of instruction. In the larger cities where the number of members justifies it, The Institute for Liberal Education maintains residence classes under salaried instructors, or "program directors." The program director is selected from the city where the course is conducted. He is in all instances an eminent and outstanding man in the community, well qualified by education and experience to handle the Program Directorship Work. He will guide the members in their studies so that they will get into the knowledge and atmosphere of the subject in the shortest possible time. He will lead in the spirit of liberal arts and guide the members to a comprehensive grasp of the subjects. In resident classes every member has the opportunity for discussion of the subjects covered, which will make for greater breadth of view.

In the smaller communities where it will not be possible to enroll a sufficient number of members to form a class under paid program directorship, enrollment can be made and the course handled by the extension method. Each member will receive the personal attention and instruction of the educators who will constitute the Tutorial Board.

The student's work is fitted into his business schedule. The resident student is not required to attend several times a week, but on an average twice a month for two years at convenient times, July and August being excepted as vacation months. The extension student is, of course, in a class by himself—to go as fast or as slow as he wishes.

The Institute for Liberal Education with its carefully selected and condensed material, presented in popular and entertaining style and always at hand for ready reference, will give in two years a good start on the road to liberal culture. The course is intended for college and non-college men alike.

## Columbia University
## College of Physicians and Surgeons

Regulations for the Degree of Master of Science in Postgraduate Medical Education: The university grants recognition for acceptable postgraduate work in the clinical specialties by means of the degree of Master of Science.

This degree is non-specific, i.e., it does not carry a designation of the special field of study to which the student has devoted himself. Only a broad definition of requirements is stated in order to permit flexibility in the training for the various clinical specialties and adaptation of that training to the needs and preparation of each student. The specific requirements for each of the specialties are formulated by the departments concerned.

A student who wishes to secure the degree of Master of Science in postgraduate medical work must present evidence of:

1. Graduation from a medical school approved by Columbia University.
2. Completion of an internship of not less than one year after graduation in a hospital approved by Columbia University.

Students who offer work pursued in other universities, laboratories or hospitals for part fulfillment of the requirements for the degree of Master of Science as hereafter set forth should file a certified statement of such training with the Director of University Admissions for evaluation.

A student admitted to the university for postgraduate medical studies who wishes to become a candidate for the degree of Master of Science will be registered upon recommendation of the department in which his work is to be done.

The requirements for the degree of Master of Science are:

1. A period of study after the internship of not less than three years in the university or in hospitals and laboratories recognized by it, at least one calendar year of which must be spent in this university.
2. Such intensive graduate training in the basic medical sciences of anatomy, embryology, physiology, biochemistry, pharmacology, pathology, bacteriology, and in other fields of science as shall be recommended by the departments concerned and approved by the Administrative Board on Post-Graduate Studies in Medicine.
3. An active experience during the three year period of not less than eighteen months in the hospital, clinics and diagnostic laboratories of the specialty elected.
4. Written, oral and practical examinations and a dissertation may be prescribed in the specialty elected and in clinical, laboratory and public health fields to which the specialty is related.

FEES: Regulations are the same as elsewhere in the university.

A student admitted to the university for postgraduate medical training may become a candidate for the degree of Doctor of Philosophy if he meets the requirements for that degree that are prescribed by the Faculties of Political Science, Philosophy and Pure Science.

---

## Child Guidance Clinic at Portland, Ore.

A child guidance clinic has been established in connection with the medical clinic at the University of Oregon Medical School, Portland. The purpose of the clinic is to study the problems of children exhibiting abnormal behavior from any cause. It has been aided by appropriation derived from the income of the Vestal Fund, which was left to the public schools by the late John Vestal.

With the establishment of the clinic, the department of psychiatry in the med-

ical school is thus made available to the community in determining causes of mental disorders and attempting to eliminate them in children whose progress in school is impaired or who present problems of conduct. The department will also aid, in an advisory capacity, the court of domestic relations and others in dealing with problem children. Special quarters and facilities have been made available in the medical school buildings. Dr. Henry H. Dixon, clinical professor of neuropsychiatry, is in charge of the clinic.

## Theobald Smith House

The Rockefeller Institute for Medical Research gave a dinner at the department of plant and animal pathology near Princeton in honor of Dr. Theobald Smith, for many years director of the department. The occasion marked the opening of the Theobald Smith House, which was for many years the residence of Dr. and Mrs. Smith and has now been remodeled as a staff house for scientific workers.

## Mary R. Lewis Fellowship in Neurosurgery

A fund of $1,800 a year has been donated by Mrs. Mary R. Lewis, Gettysburg, Pa., for the establishment of a research fellowship in neurosurgery at Temple University School of Medicine, to be known as the Mary R. Lewis Fellowship.

## George M. Kober Memorial Exercises

The Medical Society of the District of Columbia held memorial exercises, January 13, in memory of Dr. George Martin Kober, a former president of the society and for many years dean of the Georgetown University School of Medicine. He was also an expresident of the Association of American Medical Colleges. Dr. Kober died April 24, 1931.

Addresses were made by Dr. Henry C. Macatee for the medical society; Rev. W. Coleman Nevils, S. J., for Georgetown University; Mrs. Ernest R. Grant, for the Washington Tuberculosis Association; Surg. Gen. Robert U. Patterson, for the medical corps, U. S. Army; Mr. George S. Wilson, for the board of public welfare of the District; Dr. Ales Hrdlicka, for the Anthropological Society of Washington.

## Cost of Medical Care

The Committee on the Costs of Medical Care recently made a survey of the expenditures of a representative community of about 100,000 persons about equally divided between urban and rural districts. The per capita wealth was estimated to be more than $3,000, with a spendable money income of $1,255 per person; therefore the situation does not concern a center of poverty. Seventy-nine physicians rendered service there in private practice. The "average" physician normally devoted forty-nine hours a week to the practice of medicine, including thirty hours in the office, twelve hours in home calls, and seven hours in hospitals. The average working time of specialists was forty hours a week, and that of partial specialists forty-eight hours. The general practitioner, however, has a much heavier schedule: his normal working week is fifty-seven hours. There was no dearth of sickness. The reports showed 1,550 cases of communicable disease exclusive of venereal infections. There were more than 250 cases of tuberculosis. About 1,300 births received medical attention.

This is clearly a record of service that merits compensation. Yet in 1929, a period of prosperity, the people of this representative cross section of our population paid only approximately $871,000, or $8.71 per capita, in physicians' fees.

Of this amount $412,000 went to general practitioners, $236,000 to partial specialists, and the remaining $223,000 to complete specialists. The corresponding average gross incomes are $8,766, $13,111 and $15,929 per physician in these three groups, respectively. These amounts do not, of course, represent the net incomes of physicians for, on the average, only 64 per cent of their gross income remains with them. The remaining 36 per cent is used to cover the various professional expenses of practice. When these expenses, amounting to $303,000, are deducted from the aggregate amount of fees collected, it develops that the 79 physicians in private practice received a total net income of $568,000. The average net income of general practitioners is $5,689, of partial specialists $7,994, of complete specialists $11,178, and for all groups combined $7,187 per physician. The receipts of the physicians in private practice represented only one-fourth of the total cost of medical care, an equivalent amount being spent in hospitals and a large item (18.7 per cent) in drug stores. The dentists received nearly 16 per cent of the total. The amount spent for public health activities represents only a little more than 3 per cent of the total medical bill of the group.—*J. A. M. A.*, Jan. 9, 1932.

---

## Income from Medical Practice

From the study of 6,328 random reports of physicians from all parts of the United States by Dr. R. G. Leland, director Bureau of Medical Economics, American Medical Association, the following observations are made:

1. The median gross incomes for the entire group reporting lie in the range $6,500-$7,499.

2. It appears that the largest annual gross incomes are being made by physicians who have had ten or more years of preparation. The low gross incomes fall among those physicians who have had three years or less of preparation.

3. The peak of gross income seems to be reached somewhere in the period of fifteen to nineteen years in practice. The gross annual income for the period of five to nine years in practice and the long period of thirty-five to forty-nine years in practice appear to be closely parallel.

4. Although the high average annual incomes for the entire group appears to be reached in the metropolitan areas of 1,000,000 and more population, the low gross averages fall in communities of 2,500 and less population.

5. Orthopedic surgery, although furnishing only thirty-six reports, seems to be the most lucrative type of special practice for those physicians reporting gross incomes of $30,500 and less. For the entire group, the highest average annual gross income shifts to surgery. The lowest average for both groups is found in public health. Physicians in public health are principally on a salary basis and therefore the low position which they occupy in the income list is, in a measure, due to the fact that the list involves the comparison of gross incomes for many other physicians with principally net incomes for those in public health.

6. The largest number of salaried physicians among those reporting for this study have had seven years or more of preparation.

7. In the 6,328 reports studied, the percentage of physicians who derive all or most of their income from salary is largest in the population groups 10,000-25,000 and 500,000-1,000,000.

8. Both the median and the average income of physicians whose income is derived wholly or for the most part from salary is found in the interval $4,500-$5,499; less than 4 per cent of the 853 physicians in the salary or primarily net

income classification received more than $12,500 in 1928. About 25 per cent reported income more than $6,500; about 25 per cent reported income less than $3,500.

9. An estimated average net income of $5,250 for general practice is based on the average gross income of $7,781 derived in this study.—*J. A. M. A.*, 96: 1683, 1931.

## Nursing Schools in Ohio

There are 73 accredited schools of nursing in Ohio with 4,309 students enrolled. There were registered in the state 15,699 graduate nurses. More than 90 per cent of student nurses had more than a high school education. Less than 9 per cent were college graduates.

## Courses in Psychoanalysis

Elementary and advanced seminars for practicing psychoanalysts are offered by the New York Psychoanalytic Institute under the direction of Dr. Sandor Rado of the Berlin Psychoanalytic Institute and future plans include seminars for social service workers, introductory lectures for physicians and lectures for the public. Inquiries concerning these courses should be addressed to Dr. Monroe A. Meyer, executive director, 324 West Eighty-sixth Street.

## Wesley Memorial Hospital, Chicago

Paul Fesler, president of the American Hospital Association and superintendent of University Hospital, University of Minnesota, has been appointed superintendent of Wesley to succeed the late E. S. Gilmore.

Plans are approved for the erection of the new hospital building on McKinlock Campus of Northwestern University. The cost will be $5,000,000.

The new hospital will be staffed by the faculty of Northwestern University Medical School and with the Passavant Hospital will constitute the teaching hospital of the medical school.

## University of Chicago Graduate Education

The University of Chicago has a new building which is in many respects unique among American university buildings. It is known as the Graduate Education Building. It was erected with a part of the $1,500,000 given to the University by the General Education Board for the support of the scientific study of educational problems.

The General Education Board selected the University of Chicago as a center for development of the science of education for two reasons. First, the Middle West has in recent years been more vigorous in educational experimentation, in enrichment of school curriculum, and in reform of methods of teaching and of school administration than any other section of the United States or any other part of the civilized world. Second, the contributions of the Department of Education of the University of Chicago to the science of education have been so conspicuous as to justify fully the expectation that increased contributions to this science will be insured by added equipment.

The Department of Education conducts two laboratory schools—an elementary school and a secondary school. These schools are the trying-out grounds for new plans of organization and administration and for new courses of instruction. Whenever a new enterprise is undertaken in the Laboratory Schools, trained experts from among the members of the faculty of the Department of Education test the results of the innovation. Furthermore, the progress of every child taught in the schools is recorded with the greatest care and with all complete-

ness. The records thus secured are made the basis of elaborate studies of the laws of mental and physical development.

The Laboratory Schools also furnish the opportunity for experimental studies of the way in which learning in the various school subjects takes place. Some of the most important of these studies are investigations of the way in which children learn to read. It has been discovered that photographic records of the movements of a person's eyes in looking along the lines of a printed page reveal much with regard to the person's mental processes while reading. The teaching of reading in the public schools has been largely reorganized in the past fifteen years as a result of studies of this type, some of the most important of which have been made at the University of Chicago. Other equally significant studies have been made by the Department of Education in such fields as arithmetic, handwriting, and the higher mental processes.

Studies of the type described cannot be carried on advantageously without space and elaborate equipment. Because the science of education is young and very little understood, universities have, in general, not yet provided this science with adequate special quarters. It has usually been assumed that teachers, school administrators, and students of the science of education can be trained in recitation rooms of the simplest type. The new Graduate Education Building of the University of Chicago shows that an entirely new idea with regard to the science of education is beginning to be accepted. This building has a statistical laboratory, a fully equipped apparatus workshop with a skilled mechanic, dark rooms for photographic work, laboratory rooms, record rooms, work rooms for members of the staff engaged in school and college surveys and other studies in the field of school and college administration, and a library with work space for 200 students and stack space for 100,000 volumes. The stack now contains 60,000 volumes on education. There is a special-collection room, where reports of school systems and colleges are made available for students of educational administration.

In addition to the equipment described, there are office workrooms for the fifteen professors and the fourteen staff members of lower academic rank who give instruction in the department. The building is devoted strictly to graduate work. It stands between the two buildings which house the Laboratory Schools. With the older buildings now occupied by the Laboratory Schools and with the school gymnasium, which is one of the most complete in the country, the Department of Education has a plant which is not surpassed by any of the plants provided for the natural and social sciences, which were recognized in universities before the science of education came into being.

# Abstracts of Current Literature

## The Curriculum

Inasmuch as undergraduate medical instruction must be centered about the hospital, we find the influence of medical practice toward the division of clinical material and clinical thought to have permeated to varying degrees the instruction which is given to the medical student. It is a debatable question whether it is possible for the practicing physician to study and investigate in minutely divided fields without losing the viewpoint of the patient as a whole. It is certain, however, that the undergraduate student is incapable of considering one or two parts or systems of the patient and subsequently relating them to the complete picture which the patient presents. One fundamental idea must surely be maintained throughout the period of undergraduate instruction, namely: the observation and study of the whole patient, including (as was pointed out last year) his relation to society and to his environment.

It seems optimistic to believe that the student can give his attention separately to the many divisions of clinical practice and later, by himself, relate them to the human being as an entirety. It is undoubtedly true that smaller group instruction, which is a return to the old tutorial system, is pedagogically sound. It is also probably true that much can be gained by concentrating the time of the student in medicine, surgery, pediatrics, and obstetrics during periods of the scholastic year. Even this is hazardous unless the curriculum provides a definite time or opportunity throughout the year for the student to do continuous and simultaneous thinking in all of the fields of medical practice with relation to the same individual patient. Thus, if the time of the clinical year is to be divided into three months medical service, three months surgical, one month obstetric, one in pediatrics, and one in elective service, some provision must be made throughout the year for the student to consider patients as patients, regardless of their clinical affiliation.

It seems particularly doubtful that undergraduate instruction can be carried out entirely upon the more minute divisions of medical practice, either by election or assignment to the more limited services of the hospital. If this is done, the student will come through his educational career in the medical school with a wide variety of clinical ideas unrelated to each other or to the patient as such. To state it in other words, he will think from the standpoint of a case rather than from the standpoint of a patient. Since it is true that the organization of medical practice into multiple special fields has resulted in the division of hospital service into similar multiple fields, it is especially important in the organization of the medical school curriculum to avoid developing the curriculum according to the organization of the teaching hospital.—R. H. Oppenheimer, *Southern M. J.*, Jan. 1932.

---

## Changing Viewpoints in Medical Education

It is obvious aim of medical education to make good doctors. While the family doctor need not necessarily be a specialist, he should, however, be so well grounded in the science of medicine that he is capable under all circumstances of advising the family whether the patient needs to consult a specialist. That type of family doctor or family advisor could be developed better if he had a good

scientific rather than technical training. It is impossible to teach all the contents of medicine. The ultimate aim in the medical school is to put the graduate in a position where he can continue a life-long education to the best advantage. The point of view, the spirit of curiosity, a dissatisfaction with merely accepting conditions; the interests, and I would emphasize that greatly, the interest in the study of the problems of the patient and the problems of disease, these are the matters of first importance.

All of this is better secured at present in the grounding of the scientific principles of medicine and treatment than in concentrating merely on the routine of the technic. After getting the medical degree, education really, in a sense, just begins. If you put the graduate in that position where he must read intelligently, study intelligently, observe intelligently, it is perfectly obvious that he will develop better with a sound scientific background than with the mere routine and technic. That is what is needed today. So I emphasize scientific study of the problems of disease.

The real home of research is the university. It would be a calamity if those in the university did not take this view and accept the challenge. It is highly important that the members of the faculty realize there is something of special merit in the teaching of those interested in promoting knowledge, not merely retailing something handed down but communicating something that is a part of them, even though the individual may not be a gifted speaker.

One is always tempted to stress the subject that for a decade or more he has dwelt upon. In my case it is the importance of preventive medicine. Preventive medicine stands very high in the reduction of the death rate. It is unfortunate that we have a sharp line between curative and preventive medicine. The graduate should be imbued with a sense of his responsibility to the community as well as to the patient. All our curricula should be permeated with the idea of preventive medicine. Not merely diagnosis and treatment should be taught, but how the disease originates and spreads, and what is to be done to prevent further spreading demands its place.

This is a threadbare theme today, but the distinct importance of the preventive aspect should be impressed upon teachers. They should in their turn point out how disease originates and spreads. One reason why certain parts of the medical field have been encroached upon by public health officers is that they have not been preempted by the medical profession.

But my ratio pro is no longer preventive medicine, but the history of medicine which belongs to the cultural, the humanistic side. The kind of interest that Osler had adds immensely to the pleasure of the practice of the profession, adds a joy and a relief to it; also makes better doctors. We should consider what that love of books and love of literature on Osler's part meant in his life, in his relation to the students, to the faculty, and to the patients. That kind of interest will improve the quality of scientific investigators and it will also make better doctors. This historical side is the principal and about the only one which tends to do that.

I plead for a little more of the cultural side in medicine. The doctor is much more likely to have an influence with the community and a grasp of its problems, economic, political, and social, if he has this cultural background. We should never allow the curriculum of medical training to become rigid. It should always be in a state where it can adapt itself to changing conditions and knowledge.—W. H. WELCH, *Southern M. J.*, Dec., 1931.

## Teaching of Prenatal and Postnatal Care

Greer Baughman (*Virginia M. Monthly*, February, 1932) reviews the courses of instruction given in the Medical College of Virginia to undergraduates, and the instruction of graduates in medicine practicing in the state of Virginia under the auspices of the state medical society and the two medical schools of the state.

He says: The theory of prenatal and postnatal care are discussed in the junior year, but the practical application is reached in the senior year, when the student examines and instructs pregnant women in the dispensary. At the same time he is aiding in the delivery of women in the hospital and on the outside service.

There are many students working in the dispensary. The students who get their obstetrics off in the summer months are better instructed because we have fewer students and are able to give them better instruction. These comprise about one-third of the class. The graduates who intern and have three months of obstetrics are well versed in prenatal and postnatal care because during their three months service they are used as demonstrators in the dispensary under instruction.

---

## Outpatient Psychiatry

There seems to be no reason to question the fact that outpatient psychiatry has a place in the general dispensary. Today the outpatient psychiatric department represents only one phase of activity in the field of psychiatric facilities. The work demands the services of a psychiatrist who is interested and experienced not only in nervous and mental diseases proper, but also in the many ramifications of psychiatry and mental hygiene in the community. The social and psychological work necessitates the employment of those trained and experienced in these special fields.

The staff for a psychiatric department should consist of psychiatrist, psychologist, psychiatric social workers and clerical assistants. The organization of a department greatly depends upon the advancement of the community in recognizing its health and welfare needs.

Philanthropic individuals and foundations should be considered as possible sources for the budget. Private and public psychiatric institutions and city and state departments are, in some instances, sufficiently interested to help with the budget.

Progressive medical schools and general hospitals are gradually recognizing the contribution which a well organized psychiatric department can make in teaching medical students, post graduates and nurses, in ward consultation work, and in handling the outpatient psychiatric service. In return for these services they are often willing to furnish suitable quarters, equipment and supplies, and they may cooperate in financing the project. Eventually the medical school and hospital might accept complete responsibility for the department.

The functions of a psychiatric department are diagnostic, using that term in its broadest sense; therapeutic, in the community as a rule, giving early hospital and other institutional care when advisable; educational, nurses, medical students and the medical profession; cooperative, with city and state officials, departments and institutions; and investigative, directed toward the causes and treatment of behavior disorders in general.—R. P. Truitt, *Southern M. J.*, Dec. 1931.